

CRANFIELD UNIVERSITY

ATAI ZIV

AN EXPLORATION OF THE STRATEGY FORMATION PROCESS IN  
DIVERSE BUSINESS ORGANISATIONS

SCHOOL OF INDUSTRIAL AND MANUFACTURING SCIENCE

DOCTOR OF PHILOSOPHY (PHD) THESIS



CRANFIELD UNIVERSITY  
School of Industrial and Manufacturing Science  
Enterprise Integration

Ph.D. Thesis



ATAI ZIV

*AN EXPLORATION OF THE STRATEGY FORMATION PROCESS IN DIVERSE  
BUSINESS ORGANISATIONS*

Supervisor: Dr. Fiona Lettice

June 2004

This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor  
of Philosophy

© Cranfield University, 2004. All rights reserved. No part of this publication may be reproduced without  
the written permission of the copyright holder





# Abstract

The business environment is perceived as becoming ever more turbulent. New strategic management theories point to a more organic and emergent strategy formation process, emphasising the paradox of control and questioning management's role within the strategy domain. This research investigates the theoretical and empirical relationships between strategy formation, management's role and the business environment within different organisations and at different times. Sixteen cases, representing insights of the strategy formation process in a large high technology company, are presented based on action research conducted over a nineteen month period. A theoretical framework, named the Strategy Formation Matrix, is developed to investigate the relationship between the strategy formation type and the management role. The model is validated and researched theoretically against the strategy literature and empirically in a multiple case study with six diversified companies. The framework is later extended to incorporate the business environment and these relationships are investigated based on a sample of seventeen diversified companies, who represent different industrial sectors and vary in size from small to medium to large. This research has developed new frameworks and models to describe the relationships between the business environment, the strategy formation process, management's role and the size of organisation. In addition, it adds to existing models and challenges existing theories that link increased turbulence with a more emergent strategy formation process and a static business environment with a more intended strategy formation process.



# Acknowledgements

*Education is as ornament in prosperity and a refuge in adversity* (Aristotle). I am deeply grateful for the opportunity granted to conduct this Ph.D. research study and since *the only people with whom you should try to get even are those who have helped you* (John E. Southard), I would like to take this opportunity to acknowledge the members on my 'get even' list.

A special thanks to Dr Fiona Lettice for her true guidance and friendship in helping cross the long and winding road of the research. Further acknowledgments to Ron Dvir and Itzik Dana for helping me organise my life for the challenge and for offering advice when needed. Others that I owe deep gratitude to include; Karen Young, my parents: Shoshana and Jacob Ziv, my parents in law: Bela and Baruch Hessel, Steve Evans and the RODEO team.

Finally, I would like to particularly thank my lovely wife, Tali and my daughters Yuval, Hadar and Ori for bearing with me, encouraging and never doubting the need before and during the research duration.



## Author Profile

The author obtained his BA in Management and Economics from the Israel Institute of Technology in 1993 (Cum Laude). In 1997 he received an MA degree in Economics from Tel-Aviv University. His academic projects on 'Implementation of Activity Based Costing (ABC)' and 'Evaluating the Benefits of Global Diversification' were respectively awarded the Industrial Management Faculty best project award (Technion) and Ilanot award for the best seminar work in financing (Tel-Aviv University).

In previous years, the author served as analyst and financial manager in several companies in Israel. Since 1998 he has been a senior manager in a large telecom equipment vendor company in charge of Business Processes. In 2002 the author joined a consultancy and research practice called Innovation Ecology. The Author has so far done a broad range of business consultant activities. This includes portfolio management, risk management, performance management as well as strategy formation using complexity science approaches. The author has developed several unique tools and workshops for organisations, addressing corporate management, project and Research and Development level.

The author is an active researcher in several large research projects funded by the European Community in the areas of Innovation and Strategic Management. These include NIMCube (<http://www.cranfield.ac.uk/sims/ecotech/projects/nim/nimintro.htm>) (New-Use and Innovation Management and Measurement Methodology) and RODEO (<http://www.e-rodeo.org>) (Robust Development of Organisations).



# Publications

## Refereed Conference Papers

- Young K, Ziv A and Lettice F. 2001. The Big Picture, *6th National Conference of the Israel Society for Quality*, November, Tel-Aviv Israel, pp 417-420
- Lettice F, Wohlfart L and Ziv A. 2002. Integrating Complexity Theory with Strategy, *14th International Conference of the Israel Society for Quality*, Jerusalem, Israel, 18-21 November, pp 197 – 201
- Lettice F E, Roth N. and Ziv A. 2002. Performance Measurement in NPD: Implementation Case Studies, in *Challenges and Achievements in e-Business and eWork*, edited by Stanford-Smith B, Chiozza E and Edin M, Amsterdam, IOS Press, ISBN 1 58603 284 4, pp 797-804
- Lettice F, Young K and Ziv A. 2002. Big Picture Thinking in New Product Development. *9th ISPE International Conference on Concurrent Engineering: Research and Applications: Advances in Concurrent Engineering*, (eds R Goncalves, R Roy and A Steiger-Garcia), Cranfield, July, ISBN 90 5809 502 9, pp 1009-1013.
- Ziv, A. and Lettice, F. 2003. Viewing Business Development Networks as Complex Adaptive Systems: Implications for Strategy Formation and Management's Role. *Co-Creating Emergent Insight -10th International Conference on Multi-Organizational Partnerships, Alliances and Networks* , edited by Paul Hibbert, University of Strathclyde, Scotland ISBN 0-9545538-02.

## **Book Sections**

Ziv, A. 2002. The Exploitation Facet, pp 27-34, In *From Knowledge to Value: Unfolding the Innovation Cube*, Eds Pasher, E; Dvir R and Roth N., Israel: Edna Pasher Ph.D & Associates, ISBN 965-90454-0-9

Ziv, A. 2002. The Strategy Link, pp 133-138, In *From Knowledge to Value: Unfolding the Innovation Cube*, Eds Pasher, E; Dvir R and Roth N., Israel: Edna Pasher Ph.D & Associates, ISBN 965-90454-0-9

## **Others**

Kenett, R.S., Ziv A. 2002. Evaluating strategic options based on financial measurements (Hebrew). *Quality Link, Israeli Electronic Industry Association* - March 2002 (40-41 Issue), p.10-14.

Ziv, A. 2003. The Role of Complexity in Managing Strategy, SIG: Strategy and Vision, *Knowledge Board: The European KM community* (<http://www.knowledgeboard.com/>) - 8/05/2003.



# Table of Contents

<b>ABSTRACT .....</b>	<b>I</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>III</b>
<b>AUTHOR PROFILE .....</b>	<b>V</b>
<b>PUBLICATIONS.....</b>	<b>VII</b>
<b>TABLE OF CONTENTS .....</b>	<b>IX</b>
<b>LIST OF FIGURES.....</b>	<b>XVII</b>
<b>LIST OF TABLES.....</b>	<b>XXI</b>
<b>GLOSSARY .....</b>	<b>XXIII</b>
<b>1 INTRODUCTION .....</b>	<b>1</b>
1.1 Background.....	1
1.2 Research Aim, Objectives and Questions.....	2
1.2.1 Research Aim .....	2
1.2.2 Research Objectives .....	2
1.3 The Research Approach .....	3
1.4 Deliverables.....	4
1.5 Thesis Structure .....	4
1.6 Summary.....	6
<b>2 LITERATURE REVIEW .....</b>	<b>7</b>
2.1 Introduction .....	7
2.2 Strategy Definition .....	8

2.3	Strategic Management Field.....	10
2.3.1	Lengnick-Hall and Wolff (1999) - Three Core Logics.....	11
2.3.2	Stacey (2000) - Strategic Management Theories .....	12
2.3.3	Mintzberg et. al. (1998) - Ten Schools of Strategy .....	13
2.3.4	Corporate and Business Strategy .....	15
2.4	Strategy Formation Process .....	16
2.4.1	The Difference between Strategy Formulation and Formation .....	16
2.4.2	Characteristics of Emergent Strategy .....	17
2.5	Management Role in Strategy Formation Process .....	19
2.5.1	Traditional Perception of Management Role.....	19
2.5.2	Paradox of Control .....	20
2.5.3	Management Role and Preconditions for Strategy Emergence .....	21
2.6	Business Environment .....	23
2.6.1	Contingency Theory and Decision Making under Uncertainty.....	24
2.6.2	Strategy and Turbulent Environments.....	29
2.7	Gap in Existing Literature .....	31
2.8	Summary.....	32
<b>3</b>	<b>RESEARCH METHODOLOGY.....</b>	<b>35</b>
3.1	Introduction .....	35
3.2	Research Perspectives .....	36
3.2.1	Positivism versus Phenomenology .....	37
3.3	Research Purpose.....	38
3.4	Research Strategy .....	39
3.4.1	Pure, Applied and Action Research.....	40
3.4.2	The Selected Research Approach .....	41
3.5	Data Collection .....	42

3.5.1	Qualitative Data Collection Techniques.....	43
3.6	Research Design .....	49
3.6.1	Use of Multiple Methods and Sources .....	50
3.6.2	Action Research – HiCo (Group A) .....	52
3.6.3	Multiple Case Studies (Group B) .....	54
3.6.4	Survey (Group C) .....	55
3.6.5	Exploration, Expansion and Validation.....	57
3.6.6	Data Analysis.....	58
3.7	Summary.....	59
<b>4</b>	<b>STRATEGY FORMATION IN HICO.....</b>	<b>61</b>
4.1	Introduction .....	61
4.2	Principles of Action Research .....	62
4.3	Populating and Validating Mintzberg’s (1987) Model.....	63
4.3.1	Introduction .....	63
4.3.2	Intended Strategy Formation Process .....	64
4.3.3	Emergent Strategy Formation Process .....	69
4.4	Refining Mintzberg’s Model .....	73
4.4.1	Introduction .....	73
4.4.2	Constraints in Realizing Strategy .....	75
4.4.3	Business Environment .....	76
4.4.4	Blending Intended Strategy and Emergent.....	80
4.5	Research Limitations and Strengths .....	86
4.6	Summary.....	87
<b>5</b>	<b>STRATEGY FORMATION MATRIX.....</b>	<b>91</b>
5.1	Introduction .....	91
5.2	Design of the Strategy Formation Matrix.....	92

5.3	Schools of Thought.....	94
5.4	Schools within the Navigator Quadrant .....	97
5.5	Schools within the Collective Quadrant.....	99
5.6	Schools within the Environmental Quadrant.....	100
5.7	Schools within the Enabler Quadrant.....	102
5.7.1	Blend of Emergent and Intended Interpretations of Complexity .....	103
5.7.2	Totally Emergent Interpretation of Complexity .....	104
5.7.3	Blend of Proactive and Reactive Interpretation of Complexity .....	104
5.8	Summary.....	105
<b>6</b>	<b>ORGANISATIONS AND STRATEGY FORMATION .....</b>	<b>107</b>
6.1	Introduction .....	107
6.2	Multinational Conception and Manufacturing Company (L5) – Case Study.....	109
6.2.1	Background.....	109
6.2.2	Strategic Challenges .....	109
6.2.3	Strategy Formation Process.....	109
6.3	Global Financial Company (L7) – Case study .....	112
6.3.1	Background.....	112
6.3.2	Vision and Strategic Challenges.....	113
6.3.3	Strategy Formation Process.....	113
6.4	Industrial Design Company (M2) – Case study .....	115
6.4.1	Background.....	115
6.4.2	Vision and Strategic Challenges.....	116
6.4.3	Strategy Formation Process.....	116
6.5	Software Company (M3) – Case study.....	118
6.5.1	Background.....	118
6.5.2	Vision and Strategic Challenges.....	119

6.5.3	Strategy Formation Process .....	119
6.6	High Precision Parts Manufacture (S3) – Case study .....	121
6.6.1	Background.....	121
6.6.2	Vision and Strategic Challenges.....	122
6.6.3	Strategy Formation Process .....	123
6.7	Biotechnology Company (S5) – Case study.....	124
6.7.1	Background.....	124
6.7.2	Vision and Strategic Challenges.....	125
6.7.3	Strategy Formation Process .....	125
6.8	Research Limitations and Strengths .....	126
6.9	Summary.....	127
<b>7</b>	<b>BUSINESS ENVIRONMENT AND STRATEGY FORMATION.....</b>	<b>129</b>
7.1	Introduction .....	129
7.2	Companies Projection by Quadrant.....	132
7.2.1	Dynamic Quadrant.....	132
7.2.2	Static Quadrant .....	134
7.2.3	Complex Quadrant.....	136
7.2.4	Turbulent Quadrant .....	137
7.3	Companies Projection by Size.....	141
7.3.1	Projection of Large Companies .....	141
7.3.2	Projection of SMEs.....	142
7.4	Research Limitations .....	144
7.5	Summary.....	145
<b>8</b>	<b>DISCUSSION.....</b>	<b>149</b>
8.1	Strategy Formation Process Representation.....	149
8.1.1	Intended Strategy .....	150

8.1.2	Enabling Emergent Strategy .....	151
8.1.3	Business Environment .....	151
8.1.4	Refined Representation of the Strategy Formation Process .....	152
8.2	The Strategy Formation Process in Different Types of Organisations.....	153
8.2.1	Schools of Thought.....	153
8.2.2	Management Role.....	155
8.2.3	Strategy Formation and Business Environment .....	157
8.3	Managers Perception and Quantification of Turbulence.....	159
8.4	Company Size and Business Environment.....	160
8.5	Summary.....	161
<b>9</b>	<b>CONCLUSIONS.....</b>	<b>163</b>
9.1	Research Objectives .....	163
9.1.1	Research Objective 1 .....	163
9.1.2	Research Objective 2 .....	164
9.1.3	Research Objective 3 .....	165
9.2	Contribution to Knowledge .....	166
9.3	Research Limitations .....	167
9.3.1	HiCo Action Research.....	167
9.3.2	Sample of Companies.....	167
9.3.3	Qualitative Data.....	167
9.4	Further Work .....	168
9.4.1	Larger Sample.....	168
9.4.2	Quantitative Validation .....	168
9.4.3	Alternative/ Additional Business Dimensions.....	168
9.4.4	Longitudinal Study .....	169
<b>10</b>	<b>REFERENCES .....</b>	<b>171</b>

<b>APPENDIX A - ACTION RESEARCH IN HICO – CHRONOLOGICAL DIARY .....</b>	<b>179</b>
<b>APPENDIX B - ORGANISATIONAL CHANGE FRAMEWORK - QUESTIONNAIRE .....</b>	<b>195</b>
<b>APPENDIX C - INITIAL BACKGROUND SURVEY – JULY, 2002 .....</b>	<b>203</b>
<b>APPENDIX D - MENI QUESTIONNAIRE FOR INTERVIEWS .....</b>	<b>205</b>
<b>APPENDIX E - MENI ANALYSIS WORKSHOP .....</b>	<b>209</b>
<b>APPENDIX F - STRATEGY FORMATION ANALYSIS .....</b>	<b>211</b>
<b>APPENDIX G - CONTEXT ANALYSIS .....</b>	<b>215</b>
<b>APPENDIX H - INDUSTRY STRUCTURE ANALYSIS .....</b>	<b>219</b>





## List of Figures

Figure 2-1: Focus of literature review .....	7
Figure 2-2: The different dimensions of strategy (Feurer and Chaharbaghi, 1995).....	9
Figure 2-3: Deliberate and emergent strategies (Mintzberg, 1987).....	16
Figure 2-4: Strategy under varying levels of uncertainty presented in a contingency theory framework (Hatch, 1997; based on Mintzberg, 1990) .....	26
Figure 2-5: Decision making under conditions of certainty and uncertainty (Olson and Eoyang, 2001).....	27
Figure- 2-6- Models of decision-making: types of uncertainty (Thompson and Tuden, 1959).....	28
Figure 2-7: Dimension of the environment (Stacey, 2000; based on Duncan, 1972) ....	28
Figure 3-1: Strategic research decisions.....	36
Figure 3-2: Selected research approach.....	42
Figure 3-3: Multiple methods and sources .....	50
Figure 3-4: List of researched companies by group .....	51
Figure 3-5: Geographical distribution of the 17 researched companies.....	52
Figure 3-6: The cyclical process of action research (Eden and Huxham, 1996).....	53
Figure 3-7: Research design .....	56
Figure 3-8: Exploration, Expansion and Validation.....	58
Figure 4-1: Mintzberg's (1987) model of intended and emergent strategy formation process and distribution of cases .....	64
Figure 4-2: Strategic goals workshop template .....	67

Figure 4-3: Refined Mintzberg (1987) model of intended and emergent strategy formation process and distribution of cases .....	74
Figure 4-4: Examples of markets (A-D) comparison .....	77
Figure 4-5: HiCo competitor revenues relative to Q1/2002 .....	79
Figure 4-6: HiCo strategy formation process .....	81
Figure 4-7: Author as participant facilitator self diagnoses based on Olsen and Eoyang (2001) .....	86
Figure 4-8: Refined Mintzberg (1987) model of intended and emergent strategy formation process and distribution of cases .....	87
Figure 5-1: Strategy Formation Matrix (developed by the author) .....	93
Figure 5-2: Strategy Formation Matrix Quadrants (developed by the author).....	94
Figure 5-3: Mintzberg et al. (1998) School's projection on to the strategy formation matrix.....	95
Figure 5-4: Stacey (2000) School's projection on to the strategy formation matrix.....	95
Figure 5-5: Lengnick-Hall and Wolff (1999) School's projection on to the strategy formation matrix .....	96
Figure 5-10: Projection of complexity views on Enabler Quadrant.....	103
Figure 5-11: Illustrations of potential quantum leaps (based on Mintzberg <i>et al.</i> , 1998) .....	106
Figure 6-1: Illustration of the L5 Strategy Map (actual targets are not provided to the reader and illustration is slightly changed from the source, for company privacy) .....	111
Figure 6-2: L5 perceived projection on the Strategy Formation Matrix (April 2003) .	112
Figure 6-3: L7 perceived projection on the Strategy Formation Matrix (March, 2003) .....	115
Figure 6-4: M2 projection on the Strategy Formation Matrix.....	118
Figure 6-5: M3 perceived projection on the Strategy Formation Matrix .....	121
Figure 6-6: S3 products .....	122
Figure 6-7: S3 perceived projection on the Strategy Formation Matrix.....	124
Figure 6-8: S5 perceived projection on the Strategy Formation Matrix.....	126

Figure 7-2: The Business Environment Matrix (based on Buchner <i>et al.</i> , 1998).....	131
Figure 7-3: Projection of the 17 researched companies .....	132
Figure 7-4: Analysis of companies operating in Dynamic quadrant.....	133
Figure 7-5: Analysis of companies operating in Static quadrant.....	135
Figure 7-6: Analysis of companies operating in the Complex quadrant .....	136
Figure 7-7: Analysis of companies operating in Turbulent quadrant.....	138
Figure 7-8: Large companies perceived projection on Business Environment Matrix	141
Figure 7-9: Large companies perceived projection on the Strategy Formation Matrix	142
Figure 7-10: SMEs perceived projection on the Business Environment Matrix.....	143
Figure 7-11: SMEs perceived projection on the Strategy Formation Matrix.....	144
Figure 7-12: Overview of researched company's projection on the Business Environment Matrix and the Strategy Formation Matrix.....	147
Figure 8-1: Model of intended and emergent strategy formation process (Mintzberg, 1987).....	150
Figure 8-2: Refined representation of the strategy formation process .....	152
Figure 8-3: Schools' projection on the Strategy Formation Matrix .....	153
Figure 8-4: Researched companies projection on the Strategy Formation Matrix.....	154
Figure 8-5: SME example of changes in management role.....	156
Figure 8-6: Large company example of changes in management role.....	157
Figure 8-7: Relation between size, strategy formation and business environment .....	158
Figure 8-8: Relation between size, strategy formation and business environment .....	159
Figure 8-9: Perceived business environment by company size.....	160



## List of Tables

Table 2-1: The ten schools of strategy (Mintzberg <i>et. al.</i> , 1998) .....	14
Table 2-2: Blending the strategy formation schools (Mintzberg and Lampel, 2001) ....	15
Table 2-3: Paradox of control (Streatfield, 2001).....	20
Table 2-4: Sensemaking properties and management role (based on Weick, 2000).....	22
Table 2-5: Models of strategy (Brown and Eisenhardt, 1998). ....	30
Table 3-1: Comparison of positivism and phenomenology research philosophy (adapted from Gill and Johnson, 1991 and Easterby – Smith <i>et. al.</i> , 1991).....	37
Table 3-2: Selected research perspective (adapted from Behling, 1980 and Blaikie, 1993).....	38
Table 3-3: Selected research purpose (adapted from Robson, 1993).....	39
Table 3-4: Research strategy selected (adapted from Robson, 1993; Yin, 1994, Hartley, 1994 and Behling, 1980) .....	40
Table 3-5: Research type selected (adapted from Robson, 1993; Yin, 1994; Foster, 1972 and Eden and Huxham, 1996) .....	41
Table 3-6: Comparison of quantitative and qualitative data collection methods. (Bouma and Atkinson, 1995) .....	42
Table 3-7: Selected data type (adapted from Robson, 1993; Yin, 1994 and Becker and Geer, 1982).....	43
Table 3-8: Purpose and use of observation in an inquiry (Robson, 1993) .....	47
Table 3-9: The role of the observer in a participant inquiry (adapted from Robson, 1993) .....	48
Table 3-10: Data collection techniques adopted in the research study.....	49
Table 3-11: General and specific characteristics of Action Research (based on Eden and Huxham, 1996) .....	54

Table 3-12: List of researched companies within the multiple cases study .....	55
Table 3-13: Data collection .....	57
Table 4-1: Example of consensus spread between questionnaire parameters in a HiCo Business Unit (2001) .....	78
Table 4-2: General and specific characteristics of Action Research .....	88
Table 6-1: List of researched companies within the multiple cases study .....	108
Table 6-2: L5 examples of Intended and Enabler management activities.....	110
Table 6-3: L7 examples of Intended and Enabler management activities.....	114
Table 6-4: M2 examples of Intended and Enabler management activities.....	117
Table 6-5: M3 examples of Intended and Enabler management activities.....	120
Table 6-6: S3 examples of Intended and Enabler Management activities .....	123
Table 6-7: S5 examples of Intended and Enabler management activities.....	125

# Glossary

*Business unit* - is the level in the organisation at which the responsibility for the formulation of a multifunctional strategy for a single industry or product-market arena is determined (Segev, 1995).

*Case Study* - Development of detailed, intensive knowledge about a single 'case', or of a small number of related 'cases' (Robson, 1993).

*Corporations* - are a multi-industry or multi-product-market unit, that is, multi-unit business concerns. Corporations do not compete directly in the market place; they do it through their business units (Segev, 1995).

*Corporate venturing* - is the funding of new internal ventures that, while distinct from a company's core business, and granted some autonomy, remain legally part of the company (Chesbrough, 2002).

*Experiments* - Measuring the effect of manipulating one variable on another variable (Robson, 1993).

*Exploration* - includes things captured by the terms such as search, variation, risk taking, experimentation, play, flexibility, discovery and innovation.

*Exploitation* - includes such things as refinement, choice, efficiency, selection, implementation and execution (based on March, 1991 and Benner and Tushman, 2003).

*Purposive sampling* – is a survey method, where the principle of selection is the researcher's judgement. A sample is built up which enables the researcher to satisfy his specific needs in the project (Robson, 1993).

*Robust* - capable of performing well in a variety of possible future environments (Beinhocker, 1997).

*Synergy* - the ability of two or more units or companies to generate greater value working together than they could working apart (Campbell and Luchs, 1998 and Goold and Campbell, 1998).

*Survey* - Collection of information in standardised form from groups of people (Robson, 1993).



# 1 Introduction

*This Chapter outlines the background to the research and explains the focus of the thesis, detailing the relevance of the research to the current body of literature. The research aim and objectives are outlined, along with the research approach taken and the overall research deliverables. Finally the structure of the thesis will be presented.*

## 1.1 Background

Companies have witnessed growing business turbulence in the last decades in general and the last years in particular. Foust *et. al.* (2003) described 2002 as an episode of *Survivor*, where companies endured the grim reality of a technology and telecom implosion, combined with a sour economy, stagnant stock market, regulatory crackdown and fraudulent bookkeeping. Various hazards such as war, terrorist attacks and epidemic diseases also contributed to business uncertainty, requiring companies to respond quickly and in a flexible way. A CEO of an airline company recently criticised the benefit of market research and described how within several hours after a major security incident the stock holders (board of directors, management and union) of his company, in an intuitive analysis of the impact, decided on an employee cut back of 30%.

The author's academic education, consisting of first and second degrees in economics led him, at first, to regard organisation strategy formation as a rather rational decision making process for maximising profit within a set of economic constraints. However his ten years of experience, as a manager and a consultant, gradually shifted this perception of the real world to one that sees the business world as complex, unpredictable, organic, and consisting of a strategy formation process that can be both planned and emergent (Christensen and Raynor, 2003). For example, one rainy winter afternoon the author as a consultant met a sales and marketing senior executive to review the future five year business plan of the company. When politely inquiring as to why he seemed so exhausted, the manager described his dreadful day

where the CEO had rebuked him for not meeting short term financial targets, an installed system in a major customer site had crashed, he found that Research and Development were developing products outside the formal roadmap, the financial department had not transferred the budget needed to penetrate a new segment, business development had asked him to fly immediately to meet a new contact, while his wife had just reminded him to come home early to celebrate his son's birthday. Two years later it can be said that, surprisingly, the company met and even exceeded its long-term sales goals. However the source of revenue differed completely from the original plan. It resulted from a new alliance, from a product that was regarded to be at the end of its life cycle, and from an unexpected turn around in one of the geographical segments.

The role of management has shifted in the last decade from its traditional definition of central planner and controller. Palmisano, CEO of IBM, regards the revolution he is leading as the end of the imperial CEO at IBM. He claims creativity in any large organisation does not come from the individual, the celebrity CEO, but rather starts where the action is – either in the laboratory, or in R&D sites, at a customer place, or in manufacturing (Ante, 2003). Former CEO of General Electric Co., Jack Welch, hailed as one of the great business leaders of the past half century, when asked to assess his record stated: *“The biggest change we made, without question, was the move to a boundaryless company. We got rid of the corner offices, the bureaucracy, the ‘not invented here’ syndrome. Instead we got every mind in the game...”* (Garten, 2001). Azim Premji, who transformed an Indian cooking oil company into a global IT company, is known as a patient listener, who asks a lot of questions, and is eager to help out. His management characteristic is described by his managers as *“both hands-on and hands-off”* (Kripalini and Einhorn, 2003).

The *bubbling* and emergent nature of strategy as well as the *hands-on and hands-off* dilemma, preoccupied the author frequently over the last few years. This research in many ways is a personal quest to understand better the theoretical and empirical relations between strategy formation, management role and the business environment within different organisations and at different times.

## **1.2 Research Aim, Objectives and Questions**

### ***1.2.1 Research Aim***

The overall aim of the research was to provide an understanding, at a practitioner and theoretical level, of the blend of emergent and intended strategy formation processes that take place in organisations and the relationships that management and the business environment play within this process.

### ***1.2.2 Research Objectives***

Having defined the aim of the research, a literature review of the strategy management field was conducted to help the researcher better understand the context of the research and to develop clear research objectives to focus the research. These are:

**Objective 1:**

*To contextualise the different types of strategy theory that exist with relation to the strategy formation process.*

**Objective 2:**

*To investigate the relationships between the strategy formation process, the management role within this process, the organisation type and the business environment that the organisation operates in.*

**Objective 3:**

*To develop a model to describe and explain the relationships between the strategy formation process, the management role within this process, the organisation type and the business environment that the organisation operates in.*

This led to the development of four research questions to help focus the research study. These are:

1. What is the blend between intended and emergent strategy formation processes?
2. What are the constraints that stop intended strategy from being realised?
3. What role does the business environment play within the strategy formation process?
4. What role does management play within the strategy formation process?

### **1.3 The Research Approach**

Two main sources served for the research data collection. The first is HiCo (a name granted for anonymous obligation), a half billion dollar, global telecom vendor where the author has worked as a part time business consultant for the past six years, working with various management levels. HiCo served as a good platform to conduct an action research study. The RODEO (Robust Development of Organisations) consortium, a European funded research (IST-2001-35329) grounded in complexity theory, set on achieving organisational adaptiveness and robustness in turbulent environments was the second source. The project duration of thirty months, launched in April 2002, allowed the investigation to take place in a large number of diversified companies, some participating directly as consortium members and others as participants in several project activities.

A literature review was conducted to focus the research and help define the research objectives. A longitudinal action research study was conducted in one company (HiCo), which used multiple methods of data collection (interviews, workshops and observation) to understand the strategy formation process. In parallel, case studies were conducted, using workshop and interview techniques, in six companies to explore the

relationships between different organisations and their business environment and the impact this has on management role and the strategy formation process. To collect more data and to validate the author's findings, a survey was also conducted with these seven companies as well as with ten additional companies. This hybrid research strategy using multiple methods was used to conduct both an exploratory and descriptive study of the strategy formation process in organisations of differing sizes and from different industrial sectors and business environments.

## **1.4 Deliverables**

This thesis presents three deliverables:

- Theory development and validation - Mintzberg's (1987) strategy model was populated and validated through literature and the action research study in HiCo.
- Model development – the author developed the Strategy Formation Matrix based on literature and data. The model was expanded to include a representation of the business environment based on an existing model and then tested using data from seventeen organisations.
- A contribution to knowledge based on the development of a new concept and model for the theory of strategy formation and the role of management in more turbulent business environments.

## **1.5 Thesis Structure**

The thesis is structured into eight further Chapters which are described below:

### **Chapter 2: Literature Review**

The literature review Chapter describes the context of the research in relation to the relevant fields of literature and identifies the novelty of the work through its contribution to this existing body of knowledge. The literature reviewed focuses on the field of strategy management where the author chose to review, in detail, three frameworks from the literature. This is followed by a more focussed review on the key issues identified in the research objectives. This is a review of the strategy formation process, the role that management play within that process and the influence of the business environment within the strategy process. The literature section concludes by identifying the gap in existing knowledge, that the review has highlighted, and the subsequent research objectives for the study that this presents.

### **Chapter 3: Research Methodology**

This Chapter outlines the different research approaches available for a social inquiry. The research methodology used in this study is then described. A hybrid research strategy was chosen for the study using a case study and survey approach, where multiple sources of data were used. The research was both exploratory and descriptive in nature and involved both applied and action research. Data collection involved the

gathering of qualitative data in the form of interviews, workshops, literature review, observation, company publications and questionnaires.

#### **Chapter 4: Strategy Formation in HiCo**

This Chapter describes the action research phase of the research, which involved populating and validating Mintzberg's (1987) model on strategy formation using data from the real world. The author used sixteen examples from HiCo, gathered through an action research approach, to investigate and gain a deeper understanding of the organisation type, environment, constraints and management role in the strategy formation process. The chapter concludes with the strengths and limitations of the research approach.

#### **Chapter 5: Strategy Formation Matrix**

This Chapter presents the theoretical investigation of the Strategy Formation Matrix and describes the development and design of the model. The aim is to offer a model representing the blend of intended and emergent strategy formation process on one side and the type of management role on the other. The literature surrounding the different perspectives on strategy formation is then presented and mapped onto the four quadrants of the Matrix.

#### **Chapter 6: Organisations and Strategy Formation**

This Chapter present the investigation of the strategy formation process in six organisations in relation to the Strategy Formation Matrix. The investigation used multiple-case studies to conduct an empirical inquiry to investigate the strategy formation process in different companies within their real-life contexts. Companies projected their perceived positions onto the Strategy Formation Matrix which is presented and investigated in this Chapter, validating the model as a basis for further expansion.

#### **Chapter 7: Business Environment and Strategy Formation**

This Chapter outlines the Strategy Formation Matrix in relation to the business environment. It presents the Business Environment Matrix, developed by the author, and investigates the position of the 17 researched companies in relation to the two Matrices. The Chapter outlines these investigations based on companies' projection by quadrant and companies' projection by size. The Chapter concludes by outlining the limitations and strengths of the research methods adopted.

#### **Chapter 8: Discussion**

In this chapter the findings of the model development and validation phases are discussed and expanded upon. Useful insights on substantive literatures and current thinking within the field of strategy management are used to enhance this discussion.

**Chapter 9: Conclusions**

This Chapter presents the conclusions of the study. It shows that the research aims and objectives were met and reflects upon the research process undertaken. The contribution to knowledge made by this study is shown and areas for future research are identified.

**1.6 Summary**

This Chapter has introduced the thesis to the reader and helped identify the focus of the thesis and the background to the research. The Chapter also outlined the aims and objectives of the research and offered the reader an overview of the structure of the thesis.

## 2 Literature Review

*The purpose of the literature review is to describe the context of the research in relation to the relevant fields of literature and to identify the novelty of the work through its contribution to this existing body of knowledge.*

### 2.1 Introduction

The research study is focussed on the strategy formation process within an organisational context and the relationship of the business environment and management to that process (Figure 2-1).

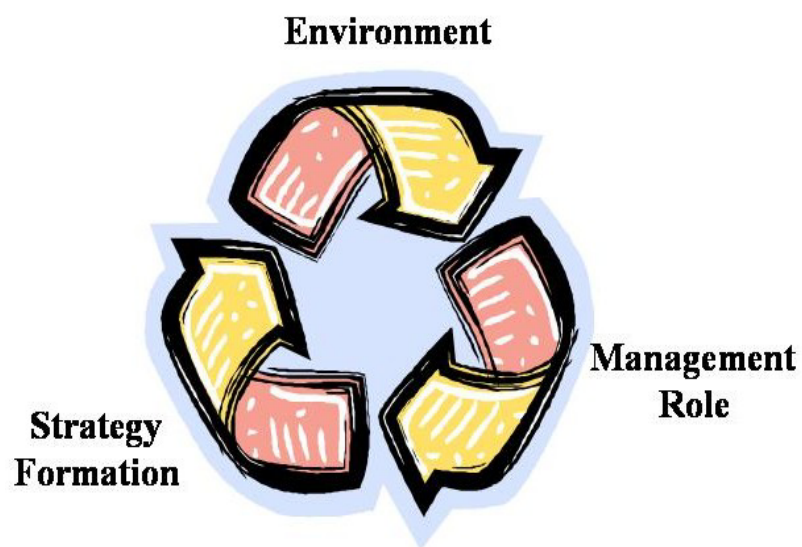


Figure 2-1: Focus of literature review

An extensive literature review was conducted to understand the field of strategy management in greater detail. There is an abundance of literature available within the

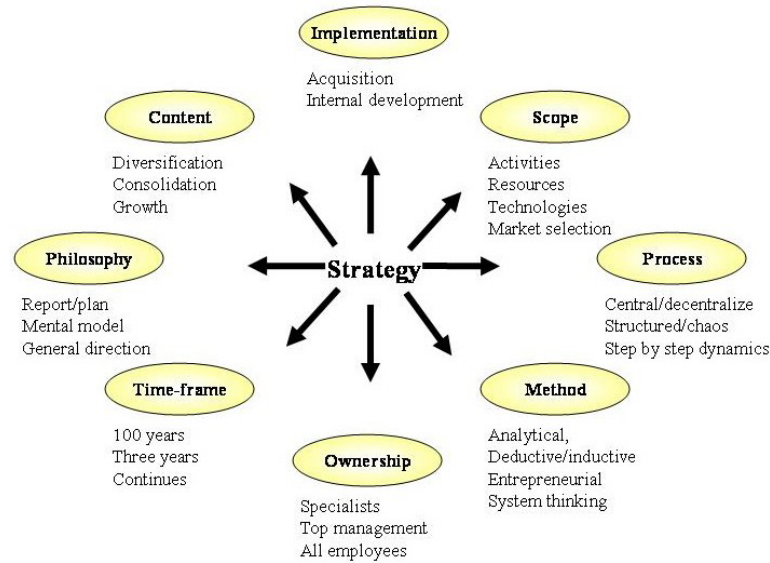
field of strategy management which has led to an array of perspectives on the subject and the publication of overlapping and competing conceptual models (Hart, 1992). The author has therefore chosen to focus on the framework and theories offered by Lengnick-Hall and Wolff (1999), Stacey (2000) and Mintzberg *et. al.* (1998). This helps to establish a common understanding of the field, from a holistic perspective, and gives the author a language to discuss the strategy literature within the context of the whole thesis. Included also in the descriptions of these frameworks are theories offered by additional strategy management authors.

The literature section begins by outlining the three models offered by the above authors on the field of strategic management to gain an overview of the field. The author then focuses on the three key elements of the research, described in Figure 2-1, offering a review of the strategy formation process, the role that management play within that process and the influence of the business environment within the strategy process. The literature section concludes by identifying the gap in existing knowledge, that the review has highlighted, and the subsequent research objectives for the study that this presents.

## **2.2 Strategy Definition**

What is strategy? Today, we must concede, it is probably the business world's most used and abused word. We have strategies for everything: from advertising to logistics to human resources to custodian engineering. This is a shame, for the concept is both profound and useful (Stern and Stalk, 1998). Although academics have studied strategy extensively for about four decades and managers, as well as consultants, frequently use the word, there are various definitions of the term Strategy. The Oxford Dictionary (Fowler and Fowler, 1984) defines strategy as a "*plan of action or policy in business*". Chandler (1962) describes strategy as "*the determination of the basic goals and objectives of an enterprise and the adoption of courses of action and allocation of resources necessary for carrying out these goals*". Andrews (1971) defines strategy as the match between what a company can do (organisational strengths and weakness) within the universe of what it might do (environmental opportunities and threats). Other key researchers in strategic management, such as Porter (1996), define strategy as "*the creation of a unique and valuable position, involving a different set of activities*". Kaplan and Norton (2004) define strategy as the way an organisation describes how it intends to create value for its shareholders, customers, and citizens.





**Figure 2-2: The different dimensions of strategy (Feurer and Chaharbaghi, 1995)**

One approach to explain the availability of different definitions is through the Greek origin of the term strategy: *strategia* – the art of war. In a business environment several dimensions may be associated with this term (Feurer and Chaharbaghi, 1995). Figure 2-2 summarises these dimensions and gives examples. The existence of several dimensions is an indication of why so many tools and frameworks exist for strategy. The variety of so many conceptual frameworks and tools in the area of strategy development cannot be regarded as mutually exclusive but must be seen as mutually supportive. It follows that those definitions which take a holistic approach to strategy capture the meaning better than those which take an isolated view (Feurer and Chaharbaghi, 1995).

Mintzberg *et al.* (1987) claims that there is no easy definition and instead argue that strategy requires a number of definitions, five in particular.

*Strategy as a plan* (intended) – a direction, a guide or course of action into the future, a path to get from here to there.

*Strategy as a pattern* (realised) – consistency or behaviour over time. Intentions that are fully realised can be called *deliberate* strategies. Those that are not realised at all can be called unrealised strategies. A third case, this is called emergent strategy, where a realised pattern was not expressly intended.

*Strategy as a position* – namely locating of particular products in particular markets.

*Strategy as a perspective* - namely an organisation's fundamental way of doing things. Changing position within perspective may be easy; changing perspective, even while trying to maintain position, is not.

*Strategy as a ploy* – that is a specific “manoeuvre” intended to outwit an opponent or competitor.

In recent years some new, radical and challenging concepts and definitions have emerged such as Stacey (2000) who looks at strategic management as “*the process of actively participating in the conversations around important emerging issues*”. Wood (1999) describes strategy as the process by which an organisation generates, develops, and maintains a robust business design capable of both *exploiting* its current distinctive capabilities (its fitness function) on or near its current fitness peak and *exploring* its strategic landscape and business ecosystem for entrepreneurial opportunities beyond the lifecycle of its current business design (its sustainability function) away from its current peak.

### 2.3 Strategic Management Field

Strategic Management Literature is vast and, since 1980, has been growing at an astonishing rate. However there are several different tendencies regarding its origin. Some regard Sun Tzu’s book, *The Art of War*, on military strategy from the fourth century B.C. as the first origin (Mintzberg *et al.*, 1998). Feurer and Chaharbaghi (1995) claim strategic management as an academic discipline evolved mainly from the beginning of the second half of the 20th century. Examples include Taylor’s work on efficiency, the rapid growth of forecasting and measurement techniques during the 1930s and the development of organisational structures and the transformation from production to demand-driven organisations after the Second World War.

Others perceive Newman’s (1951) book, as the first to demonstrate the nature and importance of strategy. In the early 1960s, Andrews, Christiansen and Ansoff laid the foundations for strategic planning by demonstrating the need to match business opportunities with organisational resources and illustrating the usefulness of strategic plans (Feurer and Chaharbaghi, 1995 and Mintzberg *et al.*, 1998).

In the course of the last four decades, strategic management has evolved in various directions, particularly in response to the ever-increasing complexity of companies’ internal configuration and changing environment. Hart (1992) claims there are an array of perspectives on the subject and the publication of overlapping and competing conceptual models. Mintzberg and Lampel (2001) warn not to adopt a pseudoscientific theory of change while investigating the field of strategy management evolution.

*“It may be that the development of strategic management is at odds with the assumed development in evolutionary biology. This presumes a succession of species, with one often replacing another --the zebra and the horse, for example, descending from some extinct animal. The schools of strategy represent a line of descent through the history of the field, but this may not be a descent by replacement.”* (Mintzberg and Lampel, 2001, pg 28)

Several scholars researched and categorised strategic management into schools and streams. Three sources, (Lengnick-Hall and Wolff, 1999, Stacey, 2000 and Mintzberg *et. al.*, 1998) are presented and have been chosen for their well established and complimenting position in strategic management research as well as their relevance to the research needs. The three different sources are further elaborated in Chapter 5.

### 2.3.1 *Lengnick-Hall and Wolff (1999) - Three Core Logics*

Lengnick-Hall and Wolff (1999) present the logical foundations shaping three prominent streams of strategic management thought: *Capability Logic*, *Guerrilla Logic* and *Complexity Logic*. The logical foundations shaping the three prominent streams of strategic management thought are summarised and then compared and contrasted. The intent is to determine whether these research streams are restatements of a single core logic using different terms to describe the same phenomena and relationships, or whether they provide alternate, and potentially competing, explanations for effective strategic action.

*Capability Logic* reflects the general premise that one firm will out-perform another if it has a superior ability to develop, use and protect elemental, platform competencies and resources. A firm can be viewed, for example, as a blend of resources that enable certain capabilities, options, and accomplishments. Some of the main principles of *Capability Logic* include: superior resources and accomplishments lead to sustained competitive advantage, complementary interdependence promotes superior accomplishment, selectivity fosters internal interdependence and facilitates adequate nurturance of core assets and competencies, protection from imitation or appropriation is essential to sustain a desirable competitive position and evolutionary equilibrium is a feasible and desirable state. Prahalad and Hamel (1990) depict core competencies as the foundation for creating the future. The emphasis is on internal capabilities that enable a firm to create and exploit external opportunities and develop sustained advantages when used with insight and adroitness.

A second core logic shaping strategic management thinking is captured in research on hyper competition and high-velocity firms. *Guerrilla Logic* contends that one firm will outperform another if it is more adept at rapidly and repeatedly disrupting the current situation to create an unprecedented and unconventional basis for competing. Some of the main principles of *Guerrilla Logic* include: all competitive advantages are transitory, disequilibrium should be initiated deliberately in a frequent and unpredictable way in order to create a series of temporary advantages, and agility relies on the anticipation and augmentation of unexpected, emergent patterns. Lengnick-Hall and Wolff (1999) claim that unlike resource-based views, high velocity thinking is not built upon existing strengths, but instead repeatedly disrupts current conditions, including a firm's own established position, to reshape relationships and realities.

Lengnick-Hall and Wolff's (1999) third stream, *Complexity Logic*, is based on an emerging focus in strategic thinking that is derived from research on business ecosystems and chaos theory. These perspectives argue that strategic success is a function of a firm's talent for thriving in dynamic nonlinear systems that rely on network feedback and emergent relationships. Some of the main principles of *Complexity Logic* include: a healthy community ecosystem is prerequisite for survival, social systems are non-linear and deterministic so that natural consequences determine sustained patterns of strategic outcomes, influence is achieved by understanding and manipulating the underlying forces and attractors that create order in the ecosystem, and transformation is relentless. Lengnick-Hall and Wolff (1999) argue effective strategies therefore require a blend of competition and cooperation. Paradoxical relationships, positive and negative feedback, and dynamic tension embedded between various actors

and processes, as well as between a firm and its context, are fundamental elements of complexity logic.

### 2.3.2 Stacey (2000) - *Strategic Management Theories*

Stacey (2000) reviews strategic management and organisational dynamics by analysing two groups of categories. The first group he refers to as the orthodox category where he distinguishes between the theory of strategic choice, the theory of learning and the theory of open systems. The second group that is reviewed by Stacey (2000) is referred to as the radical category. In the radical category, a distinction is made by Stacey (2000) between the theories that are perceived to start out with radical promises but end up with orthodox conclusions (Complex Adaptive Systems) and theories that hold out the promise of radical conclusions (Complex Responsive Processes).

*Strategic Choice* theory prescribes a procedure involving the formulation of long-term strategies and their implementation. One of the main pillars of strategic choice is cybernetic systems concepts. The prescription given for strategy formulation and implementation depend, to a great extent, on the ability of managers to forecast. However some versions of the theory incorporate dealing with uncertainty as well. The primary focus of strategic choice theory is on intention and control. It prescribes a role for managers in terms of making choices and staying in control as individuals. It emphasises the installation of large numbers of negative feedback control systems relating to information, actions and behaviour. It depicts leadership as the function of directing, inspiring and choosing the shape, position and strategic direction of whole organisations (Stacey, 2000).

According to the *Learning Organisation* theory, organisations are systems driven by both positive and negative feedback loops. The interactions between such loops tend to produce unexpected and often counterintuitive outcomes. Organisations learn when people in cohesive teams trust each other enough to expose the assumptions they are making to the scrutiny of others and then together change shared assumptions which block change. Perfect control is not possible but it is possible to identify and leverage points where control might be exerted. Stacey (2000) claims control and primacy of the individual are central to both *Strategic Choice* theory and *Learning Organisation* theory.

Stacey's (2000) *Open System* theory is based on the concept that organisms, as well as human organisations and societies, are open systems. They are systems because they consist of a number of component subsystems that are interrelated and interdependent on each other. They are open because they are connected to the environment, or super-systems, of which they are a part. As the environment becomes more complex and as organisations grow in size, companies differentiate into functions. Open System theory pays attention to both macro and micro levels and it envisages both orderly and disorderly dynamics. The former is equated with successful adaptation to the environment and the latter as an obstacle to this process.

*Complex Adaptive Systems* (CAS) theory, the first of the radical theories presented by Stacey (2000), models interaction between agents that comprise a system. Several key insights yielded by agent-based modelling of systems are mentioned. The dynamic at

the edge of chaos, for example, is understood to be a dynamic of paradox between stability and instability, which is a requirement for the emergence of novelty. Diversity, unpredictability and self-organisation are other major insights. Some authors (for example, Brown and Eisenhardt, 1998; Hamel, 2000; Olson and Eoyang, 2001; Mitleton-Kelly, 2003 and Wood, 1999) claim change has to come about through someone standing outside the system altering parameters, creating conditions, so the whole system can move to the edge of chaos. However, Stacey (2000) criticises this approach claiming some theorists emphasise the predictability aspects of the systems and see their modelling work as a route for increasing the ability of humans to control the complex world. Stacey (2000) considers this approach as an analogy of the manager as the programmer of the simulation and regards it as old recipes in new vocabulary.

Stacey (2000) adopts a more radical perspective to strategy formation based on complexity that he names *Complex Responsive Process (CRP)*. Intention emerges in the self-organising process of ordinary conversation between people. Change occurs in novel ways through the presence of sufficient diversity in organising themes. This is expressed in free-flowing conversation in which shadow themes test the boundaries of the legitimate. Managers cannot think of themselves in terms of organisational designers but rather as active participants in a complex process. The perspective of complex responsive process focuses attention more on what people are doing in the present than what they are imagining about the future (Stacey, 2000).

### **2.3.3 Mintzberg et. al. (1998) - Ten Schools of Strategy**

Mintzberg et. al. (1998) offer a critical, penetrating look at the contributions and limitations of ten dominant schools of strategic thought. Mintzberg et. al. (1998) create a comprehensive and illuminating tour through the fields of strategic management, shaping each of the ten different approaches into a coherent school of strategy formation.

Table 2-1: The ten schools of strategy (Mintzberg *et. al.*, 1998)

School	Description	Intended Message	Realised Message	Groupings
The Design School	Strategy formation as a process of <i>conception</i>	Fit	Think	Prescriptive – more concerned with how strategies should be formulated
The Planning School	Strategy formation as a <i>formal</i> process	Formalize	Programme	
The Positioning School	Strategy formation as an <i>analytical</i> process	Analyse	Calculate	
The Entrepreneurial School	Strategy formation as a visionary process	Envision	Centralise	Descriptive – consider specific aspects of the strategy formation process. Concerned less with prescribing ideal strategic behaviour than with describing how strategies do, in fact get made.
The Cognitive School	Strategy formation as a <i>mental</i> process	Frame	Worry or imagine	
The Learning School	Strategy formation as an <i>emergent</i> process	Learn	Play	
The Power School	Strategy formation as a process of <i>negotiation</i>	Grab	Hoard	
The Cultural School	Strategy formation as a <i>collective</i> process	Coalesce	Perpetuate	
The Environmental School	Strategy formation as a <i>reactive</i> process	Cope	Capitulate	Integrative – cluster various elements of the other schools into distinct stages or episodes. Stable states and transformation.
The Configuration School	Strategy formation as a process of <i>transformation</i>	Integrative, transform	Lump, revolutionise	

Table 2-1 presents the schools and some of their characteristics. The Design, Planning and the Positioning Schools are grouped as prescriptive since their main concern is how strategies should be formulated. The Entrepreneurial, Cognitive, Learning, Power, Cultural and the Environmental Schools are grouped as descriptive due to the fact that they are concerned less with prescribing ideal strategic behaviour than with describing how strategies do in fact get made. The third group consists of only one school, the Configuration School, and clusters various elements of the other schools into distinct stages or episodes. Table 2-1 also presents the difference between the intended messages of each school and the messages that are actually realised (Mintzberg *et. al.*, 1998). For example, the Learning School's intended message is to learn while its realised one is to play.

All schools' roots date back several decades and all have a degree of influence on the current period. Mintzberg *et. al.* (1998) analysed the number of publications and attention within strategic management for each school where several trends are noticed. The three perspective schools showed successive dominance, design in the 1960's, then planning in the 1970's, followed by positioning in the 1980's, which has since lost some

of its dominance but still remains influential. In the last decade the Configuration and Learning Schools have been dominant.

**Table 2-2: Blending the strategy formation schools (Mintzberg and Lampel, 2001)**

Approach	Schools
Dynamic capabilities	Design, Learning
Resource-based theory	Cultural, Learning
Soft techniques (e.g., scenario analysis and stakeholders analysis)	Planning, Learning, or Power
Constructionism	Cognitive, Cultural
Chaos and evolutionary theory	Learning, Environmental
Institutional theory	Environmental, Power, or Cognitive
Intrapreneurship (venturing)	Environmental, Entrepreneurial
Revolutionary change	Configuration, Entrepreneurial
Negotiated strategy	Power, Positioning
Strategic manoeuvring	Positioning, Power

Mintzberg and Lampel (2001) point to variants that cut across the schools and blend them together. For example chaos theory, as applied to management might be seen as a hybrid of the learning and the Environmental schools. The Dynamic Capabilities approach of Hamel and Prahalad (1994) is regarded by Mintzberg and Lampel (2001) as a hybrid of the learning and the Design schools where strong leadership to encourage learning exists. On the other hand, Resource Based Theory, which seems similar, is regarded as a hybrid of the Learning and Cultural schools.

#### **2.3.4 Corporate and Business Strategy**

Although strategy is a comprehensive concept, it is sometimes applied to different kinds and levels of organisations, organisational activities, or geographic regions. Literature distinguishes between business unit and corporate. Segev (1995) provides the following definitions:

**Business Unit** is the level in the organisation at which the responsibility for the formulation of a multifunctional strategy for a single industry or product-market arena is determined. Business unit is often referred to as Strategic Business Unit, or SBU.

**Corporations** are a multi-industry or multi-product-market unit, that is, multi-unit business concerns. Corporations do not compete directly in the market place; they do it through their business units.

The corporate strategy level involves deciding what business to be in and how to segment environments and the organisation in such a way that different parts of the organisation can address opportunities with maximum overall results (Hatch, 1997). The strategy formation process at corporate level includes several unique aspects such as *Synergy* and *Parenting Advantage*. *Synergy* is the ability of two or more units or

companies to generate greater value working together than they could from working apart (Campbell and Luchs, 1998; Goold and Campbell, 1998). Goold and Campbell (1998) identify six forms of synergies: Shared Know-How, Shared Tangible Resources, Vertical Integration, Pooled Negotiating Power, Combined Business Creation and Coordinated Strategies. Campbell *et. al.* (1995) claim that while the core competence concept appealed powerfully to companies disillusioned with diversifications, it did not offer any practical guidelines for developing corporate-level strategy. To fill the gap, a *Parenting* framework was suggested focusing on which business should a company own and what parenting approach should be taken in order to get the best results.

## 2.4 Strategy Formation Process

Realised strategies can be regarded as consistency of behaviour. Mintzberg (1987) separates the definitions of strategy as plan (consciously intended course of action) and pattern (stream of actions). Plans may go unrealised while patterns may appear without preconception. Plan is labelled as ‘intended’ and pattern as ‘realized’ strategy, as shown in Figure 2-3, distinguishing ‘deliberate’ strategies, where intentions that existed previously were realised, from ‘emergent’, where patterns are developed in the absence of intentions, or despite them (which went ‘unrealised’).

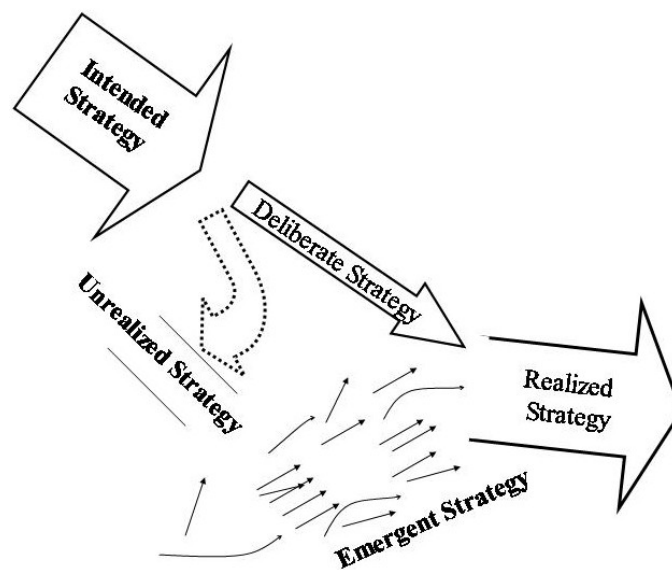


Figure 2-3: Deliberate and emergent strategies (Mintzberg, 1987)

Emergent strategy evolves from activities taking place throughout the organisation and thus can be influenced by strategic planning, but is shaped by other influences as well.

### 2.4.1 The Difference between Strategy Formulation and Formation

According to the rational models of strategy, the formulation stage of the strategy process flows from the analysis. The goals of the formulation are to discover ways to leverage opportunities and to close performance gaps by: consideration of alternative courses of action intended to achieve and/or maintain the fit between environmental



needs and organisational abilities, establishing criteria for selections among alternatives, and comparison and choice among alternatives (Hatch, 1997). The plans for the future as mentioned are referred to as *intended*.

Fully realized intended strategies rely on the artificial separation between formulators and implementers while emergent strategy does not. In the case of *emergent* strategy the term *formulation* has to be replaced by *formation* because here strategies can form without being formulated, although strategies do not have to be purely emergent. To allow for the fact that they can be, or more realistically partially are, the term *Strategy formation* is preferred over *Strategy formulation* (Mintzberg, 1994).

#### **2.4.2 Characteristics of Emergent Strategy**

Some state that strategy emerges within the general outline of a strategic plan, and from a foundation of activity taking place thorough the organisation and according to a pattern of trial and error learning (Hatch (1997) description of Quinn's (1980) logical incrementalism view). Others regard emergent strategies as strategies that come about without the explicit intention of managers but which result from the flow of more operational, day to day decision making (Johnson and Scholes, 1988). Various functions contribute in various unexpected ways to the emergence of strategies. For example, even the capital budgeting process, many times regarded as the buffer for initiatives, can drive the strategy formation process, through the emergence of strategy (the foot-in the door technique) (Mintzberg, 1994).

In the last decade, strategic management witnessed a growing trend of linking strategy formation, in general and emergent strategy in particular, to theories of complex adaptive systems.

#### **Complex Adaptive Systems**

*Emergence* is the sense of much coming from little (Holland, 1998) or the whole is greater than the sums (Kauffman, 1995a). Emergence is confronted everywhere in complex adaptive systems – ant colonies, neural networks, immune systems, the Internet, and the global economy, where the behaviour of the whole is much more complex than the behaviour of the parts (Holland, 1998). Zimmerman (2000) defines the three words that compose Complex Adaptive Systems (CAS) in the following way: Complex implies diversity or a great number of connections between a wide variety of elements. Adaptive suggests the capacity to alter or change or the ability to learn from experience. A system is a set of connected or interdependent agents. An agent may be a person, a molecule, a species, or an organisation among many other things. These agents act based on local knowledge and conditions and are semi-autonomous units that seek to maximise some measure of goodness or fitness by evolving over time.

A Complex Adaptive System (CAS) behaves or evolves according to three key principles: order is emergent as opposed to hierarchical, the system's history is irreversible, and the system's future is often unpredictable (Dooly, 1996). Beinhocker (2001) claims scientists have discovered that complex systems are difficult and often

impossible to predict because they exhibit punctuated equilibrium and path dependence. Punctuated equilibrium occurs when times of relative stability are interrupted by stormy restructuring periods (called punctuation points) caused by external events. The idea of path dependence is that one cannot predict which path a certain development will take and that the respective outcome of this behaviour will thus depend on the individual path it has taken previously. Waldrop (1992) refers to perpetual novelty, where adaptive agents are exploring their immense space of possibilities at the 'Edge of Chaos', in a position of bounded instability in between the extremes of stasis and chaos. *"Like the surface of the ocean, a boundary molecule thick separating water from air, it is the space for all possible dynamical behaviors where a near infinity of ways for an agent to be both complex and adaptive exists"* (Waldrop, 1992, pg 295).

In healthy CAS, both competition and co-operation are necessary for sustainability, and this situation has been termed co-opetition (Nalebuff and Brandenburger, 1997). Dee Hock, who founded the VISA organisation, says, *"Neither competition nor cooperation can rise to its highest potential unless both are seamlessly blended. Either without the other swiftly becomes dangerous and destructive"* (Waldrop, 1992, pg 8). Mahon (1999) describes Pond Ecology as another CAS metaphor with emphasis on co-evolution and symbiosis. The imagery is that of an eco-system, such as a pond, populated by micro organisms. The nature and degree of collaborative and competitive activities between the micro organisms varies in response to both external (to the pond) and internal stimuli (within the eco-system itself, i.e. between micro-organisms and micro-organism groupings in the pond).

Wood (1999) perceives organisations as complex, adaptive systems comprising physical, cognitive, and socially constructed realities. Such systems co-produce each other and co-evolve with their environment. In many organisations, such processes of co-production and co-evolution are unconscious, driven by incoherent political, economic, social, or technological forces in the organisation and its environment. Under such conditions, organisational success or failure is a function of a random walk, and outcomes are unpredictable and difficult to influence.

### **Questioning the Management Role in Emergence Strategy**

Maclean and Macintosh (2003) stress that in essence, emergent properties exist at the level of the system, not at the level of the elements; they express a unity at the systems level which transcends differences amongst the elements, displaying them as features of an integrated whole. Maclean and Macintosh (2003) illustrate this essence with a description by a familiar example, quoted from the contemporary philosopher Roger Scruton (1997):

*"When a painter applies paint to a canvas, he creates a physical object, by purely means. This object is composed of areas and lines and paint arranged on a two-dimensional surface. When we look at the painting, we see those areas and lines of paint and also the surface, which contains them. But that is not all we see. We also see a face that looks out at us with smiling eyes"*.

This example suggests that whilst there is clearly a relationship between the configuration of elements and the quality of the emergent property, such relationships

are at present purely understood. Maclean and Macintosh (2003) point that altering the shape of the mouth, or the mutual proximity of each eye will alter not only the geometry of these features, but will alter the general impression created by the face, but one does not really know how, until one sees the effect.

This metaphor resembles some of the questions that arise concerning management's role in an emergent strategy formation process. How can management alter the shape of the organisation strategy? Can it effect the general impression by changes in components in a systematic way or is there no cause and effect at all? Can management create and support an environment and initial conditions for emergent strategy formation? If so, how?

## **2.5 Management Role in Strategy Formation Process**

Three aspects of management role are presented. The Navigator role describes management as implementing rational planned strategy based on strong cause and effect. Later the paradox of control is presented followed by examples of management role as an Enabler to the emergence of strategies.

### **2.5.1 Traditional Perception of Management Role**

The management role of senior management is often described as looking at and analysing the Big Picture and setting strategy. This prescribes a role for managers in terms of making choices and staying in control as individuals. In the Positioning School (Mintzberg *et. al.*, 1998), for example, strategic management appears to be focusing outside the firm to explain performance. In contrast, the resource-based view of the firm concentrates on what is happening inside, and what is unique to each organisation. Stern and Stalk (1998) claim that building strategic capabilities cannot be treated as an operating matter and left to operating managers, to corporate staff, or still less to SBU heads.

*“Only the CEO can focus the entire company’s attention on creating capabilities that serve customers. Only the CEO can identify and authorize the infrastructure investments on which strategies capabilities depend. Only the CEO can insulate individual managers from any-short-term penalties to the P&L of their operating units that such investments might bring about”* (Stern and Stalk, 1998, pg 90).

Johnson and Scholes (1988) claim that many strategists follow a logical incremental role of continually adapting to their environment, not rocking the boat too much so as to maintain efficiency, and performance, whilst also keeping the various stakeholders happy. In the Entrepreneurial School (Mintzberg *et. al.*, 1998), the strategic perspective is not so much collective or cultural, as in some of the other schools, as personal and the construct of the leader. Consequently, in this school the organisation becomes responsive to the influence of that individual – subservient to his or her leadership. Foster and Kaplan (2001) believe corporations must be redesigned, from top to bottom, on the assumption of discontinuity. Management must stimulate the rate of *creative destruction* through the generation or acquisitions of new firms and the elimination of marginal performers. Collins (2001) contradicts the importance of the CEO in strategy

formation and claims, based on extensive research that good / great leaders would not start as expected with the vision and the strategy of a company. Instead, they attend to people first, strategy second. They get the right people on the bus, move the wrong people off, and usher the right people to the right seats.

### 2.5.2 *Paradox of Control*

Stacey (2000) points to the fact that complexity theory, related to management, has great implications for how the *role of the manager* is understood. A manager cannot step outside the conversational processes that are part of the organisation simply because their work requires them to talk to others. Therefore a manager cannot stand outside organisational processes and control them, direct them or even perturb them in an intentional direction. All such intentions are gestures made to others in an organisation and what unfolds from ongoing responses. Mintzberg *et. al.* (1998) perceive the role of leadership as not to pre-conceive deliberate strategies, but to manage the process of strategic learning, whereby novel strategies can emerge. They claim that strategic management involves crafting the subtle boundary between thoughts and actions, control and learning, stability and change. Brown and Eisenhardt (1998) claim managers should chart a course along the edge of chaos where a delicate compromise is struck between anarchy and order. Success is measured by continual reinvention of the organisation. Stacey (2000) claims some research into the decision-making process of a number of company's reveal that most strategic decisions are made outside a formal planning system, which is outside the bounded-rationality mode of decision making.

**Table 2-3: Paradox of control (Streatfield, 2001)**

<b>In Control</b>	<b>Not in Control</b>
Intended/Selected/Designed/Planned	Evokes/Provoked/Emerging
Aim/Goal/Objective/Target/Vision	Exploring/Searching
Detecting/Correcting deviation	Amplifying Deviations
Forming	Being formed
Known	Unknown
Predictable/Certain	Unpredictable/Uncertain
Stable	Unstable
Order/Regular pattern	Disorder/Irregular pattern
Conformity/Consensus/Sharing	Diversity/Conflict
Formal/Legitimate	Informal/Shadow
Conscious	Unconscious
Habitual movement/Culture	Spontaneous movement

Streatfield (2001) argues that mainstream thinking, with its focus on being in control excludes the aspect of not being in control, which does not represent truly the experiences of real managers. The combination of both however is more of an adequate way of making sense of the experience of line management. Managers are in control

and not in control at the same time. The experiences of managing are characterised by the simultaneous presence of these aspects, summarised in Table 2-3.

Lewin and Regine (2003) mention leadership paradoxes. The fundamental paradox in this leadership style is leading by not leading. Since processes unfold in complex systems in unpredictable ways, leading organisational change cannot come about by simply adhering to a conventional command and control approach, which is essentially linear. To accept non-linear outcomes, an uncontrollable approach and uncertainty demand nothing less than a personal transformation of the leader.

### **2.5.3 Management Role and Preconditions for Strategy Emergence**

Several scholars pursue the idea that management has an enabler role in establishing the environment and preconditions for the emergence of strategy. In order to have a beneficial influence on the longevity of an organisation, business strategy must be conscious, coherent, communicable, and intelligent (Wood, 1999). Wood (1999) suggests that in order to meet such criteria the strategy process needs to enable an organisation to: *focus and sense* (define the organisation and the context in which it is operating with some precision), *anticipate* (anticipate the ways in which the organisation's context changes and how the organisation might respond to those changes), *influence* (develop ways in which the organisation might change context in order to improve its own sustainability), *act* (motivate intelligent action at the right time in the right place in accordance with the themes of the strategy) and *learn* (promote learning coherent with itself and the context of the strategy).

Hamel (2001) believes that all forms of complexity strategy are poised on the border between perfect order and total chaos, between absolute efficiency and blind experimentation, between autocracy and complete ad hococracy. The profound implications for how one thinks about strategy and where one should focus attention if the goal is to develop a capacity for strategy innovation deep within organisations. Hamel (2001) believes there are live preconditions for the emergence of strategy such as encouraging new voices, new conversations, new passions, new perspectives and new experiments.

The role of management according to Olson and Eoyang (2001) is to help clients identify their significant differences, to establish transforming exchanges that will make the differences generative, and to articulate the self-organising patterns that emerge. Mitleton-Kelly (2003) argue for a different approach to managing organisation through the identification, development, and implementation of *enabling infrastructure*, which includes the cultural, social, and technical conditions that facilitate the day-to-day running of an organisation or the creation of a new organisational form.

Weick (2000) explains that an organisation operating in turbulence should constantly incorporate a sensemaking process. When people talk about sensemaking in an organisational setting, they discuss at least seven properties (social context, identity, retrospect, cues, ongoing flows, plausibility, and enactment) of that setting that have an effect on their efforts to size up what they face. One way to animate these seven

properties of sensemaking into a process is by means of a familiar recipe. Weick (2000) offers an organisational context in which he identifies guidelines for management to pursue in order to foster improved sensemaking in the organisation. Table 2-4 describes the seven properties of sensemaking and the management role as enabler.

**Table 2-4: Sensemaking properties and management role (based on Weick, 2000)**

Property of sense making	Description	Management Role
Social context	<i>What I say and do is affected by the audience that I anticipate will audit the conclusions I reach.</i>	Encourage conversation.
Identity	<i>The recipe is focused on the question of who I am. The answer to which lies partly in what my words and deeds reveal about what I think and feel.</i>	Give people a distinct, stable sense of who they are and what they represent.
Retrospect	<i>To learn what I think and feel. I look back over what I said and did.</i>	Preserve elapsed data and legitimise the use of those data.
Salient cues	<i>What I single out from what I say and do is only a small portion of all possible things I might notice.</i>	Enhance the visibility of cues.
Ongoing projects	<i>My talk and action are spread across time, which means my interests early in the scanning may change by the time the scanning concludes.</i>	Enable people to be resilient in the face of interruptions.
Plausibility	<i>I need to know only enough about what I think to keep my project going.</i>	Encourage people to accumulate and exchange plausible accounts.
Enactment	<i>The whole recipe works only if I produce some object in the first place that can be scrutinised for possible thoughts and feelings.</i>	Encourage action.

In the sensemaking view, people in the organisation try things out, discover what they are doing as they experience the outcomes of their actions, and then analyse the relationships to make sense out of their experience. Their sensemaking becomes codified as a strategy when they claim to have intended what they actually did (Hatch, 1997).

Ambrossini and Bowman (2002) claim routines might be a source of advantage, therefore what causes success in an organisation is idiosyncratic to each organisation. They suggest that *“The role of the manager and of the strategist and her/his vocabulary has to change. Maybe one needs to start to understand strategy as recognising organisation routines and maybe the word manage needs to be replaced by words like protect, nurture and leverage rather than control, monitor or plan”* (pg 37).

Managers need to start understanding that the activities that create value need to be nurtured and may be leveraged to other parts of the organisation where they could be of even greater value. Brown and Eisenhardt (1998) argue management should survive, change and reinvent in order to generate a continuous flow of competitive advantage. This will be achieved by implementing three main concepts that include the edge of

chaos (structures and chaos), edge of time (past and future) and time pacing (transitions and rhythm).

One of the important aspects of strategy formation is crafting a conversation in the organisation that matters. Beer and Eisenstat (2004) claim most failures in the organisations start when top management advocates a new direction and begins to develop a strategy without finding out what influential people in other parts of the organisation think of the new focus. They thereby set themselves up to be blindsided by concerns that emerge later. According to Beer and Eisenstat (2004), a conversation about strategy needs to move back and forth between advocacy and inquiry, has to be about the issues that matters most, has to be collective and public, has to allow employees to be honest without risking their jobs and has to be structured.

One of the strategy tradeoffs management has to confront is balancing exploration and exploitation (March, 1991; Wood, 1999 and Benner and Tushman, 2003). *Exploration* includes things captured by the terms such as search, variation, risk taking, experimentation, play, flexibility, discovery and innovation supporting long term sustainability, while *Exploitation* includes such things as refinement, choice, efficiency, selection, implementation, execution mainly of existing capability supporting short term optimisation. Managers should enable multiple strategy or dynamic multi-movements of exploration and exploitation, focusing on short term and long term, existing and new competence, collaboration and competition all at once.

## 2.6 Business Environment

At the heart of the traditional approach to strategy lies the assumption that executives, by applying a set of powerful analytic tools, can predict the future of any business accurately enough to choose a clear strategic direction for it. The process often involves underestimating uncertainty in order to lay out a vision of future events sufficiently precise to be captured in a discounted-cash-flow (DCF) analysis (Courtney *et. al.*, 1997). Yet recent advances in technology coupled with global political climate that is favourable to free markets caused some industries to be more turbulent (Chakravarthy, 1997). Hamel and Valikangas (2003) claim the world is becoming turbulent faster than organisations are becoming resilient. In the last decade, a growing number of strategic approaches have tried to cope with turbulence (for example Stacey's (2000) Complex Responsive Processes and Mintzberg *et. al.*'s (1998) Learning School).

An interesting debate in strategy has long focused on the sources of performance differences among firms. McGahan and Porter (1997) argue that despite the resource base line of thought, the firms performance is most influenced by unique organisational processes affected by idiosyncratic historical factors, industry still matters. The results of their empirical study indicate that variation in year effects, corporate-parent effects, and segment-specific effects account for the aggregate variance in business segments profits. Another finding is that the importance of the effects differs substantially across economic sectors.

The term turbulence holds a variety of definitions between managers and might be over used. A common approach in the literature is to define turbulence as the result of two

main influences – complexity and dynamics (Duncan, 1972; Mintzberg *et al.*, 1998 and Buchner *et al.*, 1998). Complexity is the number of external factors that have to be considered during the decision making process, the disparity of these factors and their distribution across the various business areas. Dynamics is the frequency of change in the factors in decisive business areas, the degree of radicalism these changes exhibit and the regularity of their occurrence. Only situations that combine high complexity and high dynamics lead to what is referred to as a turbulent environment.

It is recognised, then, that in conditions far from certainty managers have to apply significantly different decision-making modes to those required in conditions close to certainty. One approach for describing uncertainty is Courtney *et al.*'s. (1997) four levels of uncertainty. *Level one* is referred to as *clear-enough future*. At this level managers can develop a single forecast of the future that is precise enough for strategy development. Although it will be inexact to the degree that all business environments are inherently uncertain, the forecast will be sufficiently narrow to point to a single strategic direction. *Level two* refers to *alternate futures*. At level two, the future can be described as one of a few alternate outcomes, or discrete scenarios. Analysis cannot identify which outcome will occur, but it can help to identify the respective probability of each scenario. The possible outcomes are discrete and clear, but it is difficult to predict which one will occur. The best strategy is dependent on which one does occur. *Level three* refers to a *range of futures*. At level three, a range of potential futures can be identified, that range is defined by a limited number of key variables, but the actual outcome may lie anywhere along a continuum bound by that range. There are no natural discrete scenarios. *Level four* refers to *true ambiguity*. At level four, multiple dimensions of uncertainty interact to create an environment that is virtually impossible to predict. Unlike level three situations, neither the range of potential outcomes or scenarios can be identified within that range. It might even be impossible to identify, much less predict, all the relevant variables that will define the future. Level four situations are quite rare, and they tend to migrate toward one of the other levels over time.

### **2.6.1 Contingency Theory and Decision Making under Uncertainty**

The development of contingency theory was a reaction against the idea that there is one best way in management, such as the 1960's clear prescriptions like Management by Objectives (MBO), which were dominant (Stacey, 2000). Instead, the effectiveness of a particular organisational structure, culture or strategy is contingent upon (depends upon) a number of factors. The most important of these contingency factors are usually held to be: the environment (particularly the market), size of the organisation, the technology it employs, the history and the expectations of employees and customers. Stacey (2000) states that success will be secured when an organisation obtains a good match between its situation and its strategic structure. Mintzberg *et al.* (1998) identify four dimensions to describe environment, *Stability* where an organisation's environment can range from stable to dynamic, *Complexity* where an organisation's environment can range from simple to complex, *Market diversity* where an organisation's environment can range from integrated to diversified and *Hostility* where an organisation's environment can range from munificent to hostile. Stacey's (2000) criticism of contingency theory is its main assumption that approximately the same cause will have the same effect. It does



not envisage escalation in which a tiny difference between two causes leads to two completely different outcomes. It does not for example, allow for the possibility that two organisations operating in the same environment may develop in totally different directions simply because one gained a slightly bigger market share than the other, in a particular product line at a particular point in time.

Figure 2-4 presents an example of strategy under varying levels of uncertainty presented in a contingency theory framework (Hatch, 1997; based on Mintzberg, 1990). Hatch (1997) describes the following characteristics of each quadrant. In a stable environment it is presumed that a rational model can exist since the level of uncertainty is low. In the case of low environmental complexity coupled with rapid change, a moderate level of uncertainty exists and a rapid response is essential (formulators implement). In a stable environment that is complex, uncertainty is moderate however the situation is complex. This condition is frequently associated with organisations that rely heavily upon expertise (for example, hospitals and universities). The most challenging environmental conditions are associated with the category of high uncertainty.

Mintzberg *et. al.* (1998) state that: *“The external environment is not some kind of pear to be plucked from the tree of external appraisal. It is, instead, a major and sometimes an unpredictable force to be reckoned with. Sometimes conditions change unexpectedly so that intended strategies become useless. Other times environments are so unstable that no intended strategy can be useful...”* therefore *“In an unstable or complex environment... either the ‘formulator’ has to be the ‘implementor’, or else the ‘implementors’ have to ‘formulate’. In other words, thinking and action have to proceed in tandem...”* (Mintzberg *et. al.*, 1998, pg 41).

		<i>Complexity</i>	
		Low	High
<i>Rate of change</i>	Slow	<i>Rational model</i>	<i>Implementers formulate</i>
	Fast	<i>Formulators implement</i>	<i>Radical model</i>

**Figure 2-4: Strategy under varying levels of uncertainty presented in a contingency theory framework (Hatch, 1997; based on Mintzberg, 1990)**

High rate of change and high complexity conditions occur in all organisations sometimes (i.e. at the point at which you experience a totally unexpected shift in environment) and in some organisations much of the time (i.e. organisations heavily involved in new technologies). Hatch (1997) claims that in turbulent situations, strategy is used as a sensemaking device to allow organisational members to act and thereby to produce order out of the chaotic experiences.

When levels of uncertainty are very high managers are, by definition, ignorant even of the outcomes that might possibly flow from a decision they make and an action they take (Stacey, 2000, pg 93). They do not know how their actions may be related in a cause-and-effect sense to the outcomes of those actions. As the environment becomes more complex and as organisations grow in size, companies differentiate into functions. Research shows the more unpredictable the environment becomes the more decentralised the organisation becomes, pushing the focus of decision making down the hierarchy. Organisational conflict solutions are very much dictated by the need to adapt to the environment (Stacey, 2000).

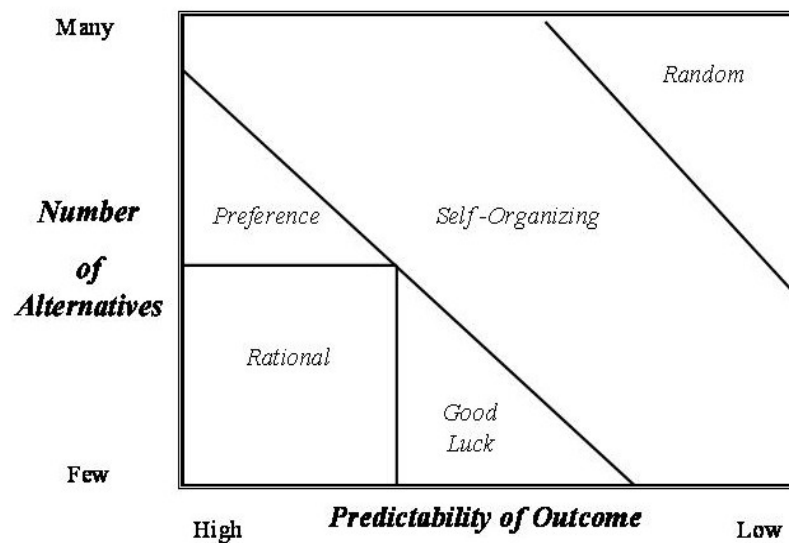


Figure 2-5: Decision making under conditions of certainty and uncertainty (Olson and Eoyang, 2001)

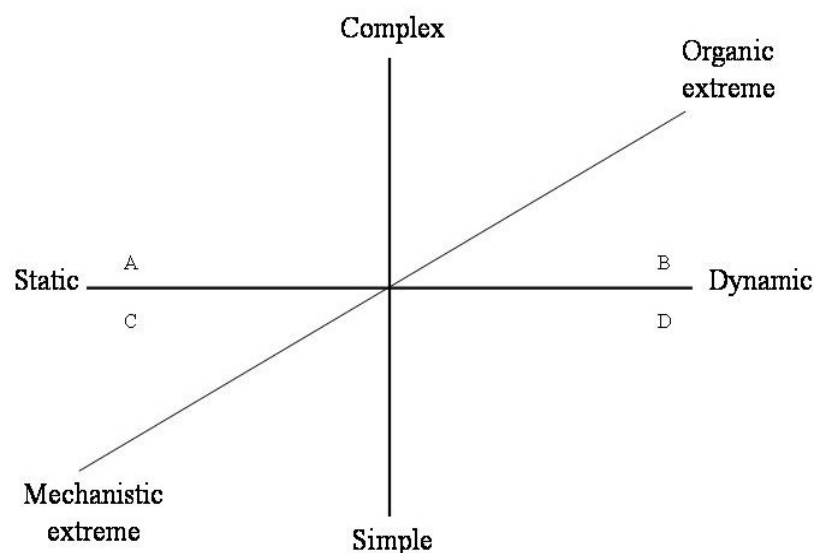
Olson and Eoyang (2001) present an alternative model (Figure 2-5) that represents decision-making under conditions of certainty and uncertainty. The dimension of predictability of outcome classifies decisions as to their likely outcomes, that is, whether the individual or group has a high or low degree of certainty about their outcome. The second dimension identifies the number of alternatives available. Few alternatives narrow the decision towards certainty. Within the models there are five types of decisions: rational, preference, good luck, self-organising and random. Rational decisions can be made in a system when there are few alternatives with highly predictable outcomes. Preference is associated with high predictability and many alternatives leading to many feasible alternatives. Making a decision in this domain often requires negotiation, compromise, or exertion of political influence. Good Luck represents low predictability and few alternatives, where searching for patterns in the randomness are a better path than in-action. Randomness reflects low predictability and many alternatives where any option is equal to another. Self-organising represents the complexity that exists between randomness and the areas handled by traditional decision-making, where the decision involves a high number of interactions.

Stacey (2000) mentions several interesting models to describe the effect of uncertainty on the decision-making mode. Stacey (2000) presents Thompson and Tuden's (1959) model (Figure 2-6) that shows how managers shift from one mode of making decisions to another, as the situation changes. Where causal connections are clear objectives shared, the conditions exist for managers to take decisions in a rational way. However as they move away from these conditions it becomes impossible to apply rational logic and so they have to use other approaches. Thus, when causal connections are clear but managers object, conflict decisions have to be made in a political manner. When managers are agreed on what they should be trying to achieve but the causal connections make it unclear how to do so, then they will have to use judgemental or intuitive modes. The most difficult situation is where causality is unclear and objectives conflict. Here managers will have to decide a way that combines intuitive individual judgements with political interaction in a group.

		<i>Cause and effect</i>	
		Clear	Unclear
<i>Objectives</i>	Conflict	<i>Compromise + Negotiation</i>	<i>Unprogrammable – 'outcomes' rather than solutions</i>
	Shared or agreed	<i>Rational-Logical</i>	<i>Judgment of feasibility - 'will it work?'</i>

**Figure- 2-6- Models of decision-making: types of uncertainty (Thompson and Tuden, 1959)**

Duncan (1972) distinguishes environments that are static from those that are dynamic. The two measures create four archetypal environments (Figure 2-7). The simplest archetype is the static and simple environment, where the appropriate organisational system is a mechanistic one with rational modes of decision-making. The most demanding of these archetypal environments is the complex dynamic one; it is only organic organisational systems that will survive - those with flexible, political, intuitive modes of making decisions. In between these extremes, some pragmatic combination of the mechanistic and organic is required.



**Figure 2-7: Dimension of the environment (Stacey, 2000; based on Duncan, 1972)**

### 2.6.2 *Strategy and Turbulent Environments*

In turbulent environments, long term forecasting is impossible and dramatic change can occur unexpectedly. As a result, flexibility and adaptiveness are essential for organisations. Guidelines and decision rules can help cope with complexity (Levy, 1994). Eisenhardt and Sull (2001) investigate the sources of competitive advantage in high-velocity markets. The secret, they say, is strategy as simple rules. The companies know that the greatest opportunities for competitive advantage lie in market confusion, but they recognise the need for a few crucial strategic processes and a few simple rules. In traditional strategy, advantage comes from exploiting resources or stable market positions. In strategy as simple rules, advantage comes from successfully seizing fleeting opportunities.

Traditional strategy tends to emphasise a single focused line of attack - a clear statement of where, how, and when to compete. Beinhocker (1998) states that in a complex adaptive system a focused strategy to dominate a niche is necessary for day-to-day survival, but not sufficient in the long run. Given an uncertain environment, strategies must also be *robust*, that is, capable of performing well in a variety of possible future environments. Beinhocker's (2001) guidelines for creating robust adaptive systems include investing in diversity, valuing strategies as *real options*, incorporating a population of strategies and bringing the market inside by corporate venturing. *Corporate venturing* is the funding of new *internal* ventures that, while distinct from a company's core business, and granted some autonomy, remain legally part of the company (Chesbrough, 2002).

In financial investment literature in the last decade, there is growing criticism on traditional analysis approaches (i.e. Net Present Value and Discounted Cash Flow) for not incorporating uncertainty and management flexibility. *Real options* analysis provides a linkage between managerial flexibility and investment uncertainties (Micalizzi and Trigeorgis, 1999). Real options literature is composed of four main categories that include deferment or temporary suspension, expansion, switching and contraction and /or abandonment of investments. Luehrman (1998) presents a portfolio model for real option incorporating the velocity of investment assumptions representing how much things can change before an investment decision must finally be made. The model suggests monitoring the options and looking for ways to influence the variables that determine option value and outcomes.

Table 2-5: Models of strategy (Brown and Eisenhardt, 1998).

	Five Forces	Core Competence	Game Theory	Competing on the Edge
<b>Assumptions</b>	Stable industry structure	Firm bundle of competences	Industry viewed as dynamic oligopoly	Industry in rapid, unpredictable change
<b>Goal</b>	Defensible position	Sustainable advantage	Temporary advantages	Continuous flow of advantages
<b>Performance Driver</b>	Industry structure	Unique firm competences	Right Moves	Ability to change
<b>Strategy</b>	Pick an Industry, pick a strategic position, fit the organisation	Create a vision, build and exploit competences to realize vision	Make the "right" competitive and collaborative moves	Gain the "edges" time pace, shape semi coherent strategic directions

Brown and Eisenhardt (1998) link the practical concerns of business managers to complexity and evolution. They recommend a strategy that harnesses the dynamic nature of change to create a continuous flow of competitive advantages. Table 2-5 presents a comparison between the assumption and themes presented by Brown and Eisenhardt (1998) as ‘competing on the edge’ to more traditional strategy concepts such as five forces, core competence and game theory. It can be seen that the main assumptions regarding the environment differ and assumptions also vary regarding the environment in the derived goal, performance driver and strategy concepts. For example in the five forces model (Porter, 1980) the assumption of a stable environment is essential to allow a defensible position compared to the ‘competing on the edge’ model where industry is in rapid, unpredictable change therefore the desired goal is a continuous flow of advantages.

Weick and Sutcliffe (2001) regard one of the great challenges any business or organisation can face is how to deal with the unexpected. Based on research conducted in high reliability organisations (HROs) such as aircraft carriers, nuclear power plants, fire fighting, they unfolded the devolved ways that these organisations have to confront the unexpected. HROs make up what Weick and Sutcliffe (2001) have termed as *mindfulness*, meaning they organise themselves in such a way that they are better able to notice the unexpected in the making and halt its development. The characteristics of the term are preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, commitment to resilience and deference to expertise.

Kauffman (1995b) provides a metaphor for co-evolution of business with competitors named the Red Queen Effect, after her comment to Alice: “*You have to run faster and faster just to stay in the same place!*” In biology where this effect applies, all species keep changing in a never-ending race simply to sustain their current level of fitness. A study (Beinhocker, 1997) of the performance of more than 400 companies over 30 years reveals that firms find it difficult to maintain higher performance levels than their

competitors for more than about five years at a time. Long-term superior performance is achieved not through sustainable competitive advantage but by continuously developing and adapting new sources of temporary advantage and thus being the fastest runner in the race.

Hamel and Valikangas (2003) believe resilience should be the new strategy of surviving organisations. In a turbulent age, the only dependable advantage is a superior capacity for reinventing the business model before circumstances force the company to. Any organisation that hopes to become resilient must address four challenges. The first are *The Cognitive challenges* where a company must become free of denial, nostalgia and arrogance and be deeply conscious of changes that are likely to affect its success. *The Strategic challenges* where resilience requires alternatives as well as awareness; creating a platform of new options as compelling alternatives to dying strategies. *The Political challenge* is when organisations must be able to divert resources from yesterday's products and programmes to tomorrow's. The last challenge is *The Ideological challenge* where companies need to embrace a creed that extends beyond operational excellence and flawless execution.

*"Strategic resilience is not about responding to a one time crisis...it's about continuously anticipating and adjusting to deep, secular trends that can permanently impair the earning power of a core business. It's about having the capacity to change before the case for change becomes desperately obvious"* (Hamel and Valikangas, 2003).

Gates and Hemingway (2001) claim that time to market is shrinking for every business. The most important speed issue is often not technical but cultural. They state that management should therefore encourage and support the following critical success factors: fast response, share bad news and act, build a flat organisation, foster discussion and foster experimentation including rewarding worthy failure.

## 2.7 Gap in Existing Literature

Management's role in the intended strategy formation process was widely discussed in previous years and generally agreed upon (for example Johnson and Scholes, 1988; Stern and Stalk, 1998 and Foster and Kaplan, 2001). However, in the last decade, management's role in the emergent strategy formation is widely debated. While some claim that preconditions can be set (for example Wood, 1999; Hamel, 2001; Brown and Eisenhardt, 1998 and Ambrossini and Bowman, 2002), others claim that management cannot set any preconditions aside for participating in the ongoing conversation that is taking place (for example Stacey, 2000 and Streatfield, 2001). Furthermore, the paradox of control (for example Kauffman, 1995a; Brown and Eisenhardt, 1998 and Streatfield, 2001) in an organisation and the implied blend of management activities in different organisations or in the same organisation at different times have to be further explored.

Links have been made in literature to the general implication that increased uncertainty and turbulence in the business environment leads to a strategy formation process that is more emergent, organic and natural (for example Mintzberg, 1990; Hatch, 1997; Stacey,

2000 and Olson and Eoyang, 2001). However, what is missing is empirical data to support these links.

Literature differentiates between corporate strategy and SBU (Strategic Business Unit) especially when addressing portfolio management, synergy and core competence (for example Prahalad and Hamel, 1990; Segev, 1995 and Goold and Campbell, 1998). However in discussing strategy formation in general and emergent strategy in particular, little differentiation if any is done based on company size. Most literature evolves around large companies while small companies have tended to be neglected.

This research sets to contribute to knowledge by investigating the relationships between strategy formation, management role, business environment and organisation type both in a theoretical and empirical way. The following objectives are therefore set for this research.

**Objective 1:**

*To contextualise the different types of strategy theory that exist with relation to the strategy formation process.*

**Objective 2:**

*To investigate the relationships between the strategy formation process, the management role within this process, the organisation type and the business environment that the organisation operates in.*

**Objective 3:**

*To develop a model to describe and explain the relationships between the strategy formation process, the management role within this process, the organisation type and the business environment that the organisation operates in.*

This has led to the development of four research questions to help focus the research study. These are:

1. What is the blend between intended and emergent strategy formation processes?
2. What are the constraints that stop intended strategy from being realised?
3. What role does the business environment play within the strategy formation process?
4. What role does management play within the strategy formation process?

**2.8 Summary**

The literature review chapter has presented an extensive but not exhaustive review of the literature within the field of strategy management. This review included the



description of three frameworks offering an overarching perspective on the field; these were the models of Lengnick-Hall and Wolff (1999), Stacey (2000) and Mintzberg *et al.* (1998).

The review of the literatures surrounding the strategy formation process, the role of management and the business environment of organisations within this process has led to several conclusions and acts as a basis for the research study. Firstly it has been concluded that within the literature surrounding intended strategy formation, the role that management plays is well documented and clear. Whereas, from the review of the literature surrounding emergent strategy formation, the role of management is less well defined and there appears to be great debate about what this role should involve. Secondly, there is now a firm recognition that organisations face business environments that are not only stable and static but also turbulent and dynamic. Historically, literature within the field of strategy management has focussed upon the former business environment condition but increasingly focus is being applied to the latter. This has allowed for a link to be established within theory which states that organisations facing a turbulent business environment tend to adopt a more emergent strategy formation process. Finally it was concluded that scant attention has been paid to, within literature, organisational type and size when discussing strategy formation, especially in the context of emergent strategy formation. It was concluded that discussions very often focus around large, multinational organisations and smaller organisations have been somewhat ignored.

From these conclusions, gaps in the existing body of knowledge were identified and research objectives and questions developed for the study.



## 3 Research Methodology

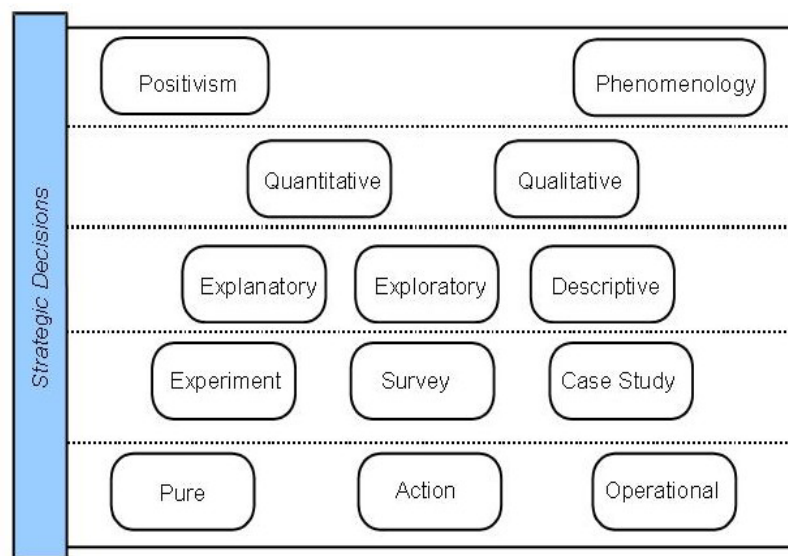
*This Chapter outlines the different research approaches available for a social inquiry and describes the research design chosen for this research. The aim is to select the most appropriate research methodology through comparison with alternative approaches.*

### 3.1 Introduction

Prior to an inquiry of this nature it is necessary to design the research approach that will be adopted. The researcher must make several choices (Figure 3-1) as to what the appropriate research methodology is for the study in question. The decisions are not based on researcher preference but on the nature of the inquiry itself and the research questions posed at the start. There may be several appropriate research paths and at the same time, many inappropriate ones (Easterby-Smith, *et. al.*, 1991). The methodological design should be limited by the goal of providing valid, credible and useful answers to the research questions selected (Robson, 1993).

This Chapter outlines some of the research strategies available to researchers involved in a social inquiry and the discussions surrounding the various options. The particular research strategy chosen for this study will then be presented and the rationale behind the choice explained.

Robson (1993) defines research strategy as the “*general approach taken in an enquiry*”. Strategies and the methodologies should be developed with specific regard to the research questions posed and should be appropriate to the given setting. After reviewing the research strategy literature and considering the research question the following strategic alternatives for decisions have been identified.



**Figure 3-1: Strategic research decisions**

## 3.2 Research Perspectives

The study of people and how they think, feel and behave both as individuals and groups clearly lies within the domain of the social sciences. In attempting to understand the relationships between organisations and how these are perceived and operated by the people involved in them, it is therefore necessary to employ methods and approaches originating from the social sciences. The social sciences include areas such as psychology, sociology, anthropology, politics and education and each area has its own epistemological and methodological preferences.

In designing a research inquiry, Patton (1990) states that it is important to know about the methodological paradigms debate in the field of a social inquiry in order to appreciate the choice of methods and perspectives (worldviews or paradigms) available to a researcher. There are two major and opposing perspectives on which research into social inquiry is based, the Positivist paradigm and the Phenomenology paradigm. There are a number of other research perspectives available to a researcher (see Denzin and Lincoln, 1994, pg. 13), but for the purpose of this inquiry the more traditional perspective of Positivism is outlined and contrasted to the alternate perspective of Phenomenology.

### 3.2.1 Positivism versus Phenomenology

**Table 3-1: Comparison of positivism and phenomenology research philosophy (adapted from Gill and Johnson, 1991 and Easterby – Smith *et. al.*, 1991)**

	Positivism – Deduction	Phenomenology - Induction
<b>Basic beliefs</b>	<ul style="list-style-type: none"> <li>• Explanation via analysis of causal relationships and fundamental laws.</li> <li>• World is external and objective.</li> <li>• Observer is independent.</li> <li>• Science is value free.</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation of subjective meaning held by subjects through understanding.</li> <li>• World is socially constructed and subjective.</li> <li>• Observer is part of what is observed.</li> <li>• Human interests drive Science.</li> </ul>
<b>Researcher should</b>	<ul style="list-style-type: none"> <li>• Use various controls, physical or statistical, to allow the testing of hypotheses.</li> <li>• Use highly structured research methodology to ensure above.</li> <li>• Formulate hypotheses and test them.</li> <li>• Reduce phenomena to simplest of elements.</li> </ul>	<ul style="list-style-type: none"> <li>• Be committed to research everyday settings, to allow access to, and to minimise reactivity among the research subjects.</li> <li>• Use minimum structure in research methodology to ensure above.</li> <li>• Develop ideas through induction from data.</li> <li>• Look at the totality of each situation.</li> </ul>
<b>Preferred Methods</b>	<ul style="list-style-type: none"> <li>• Generation and use of quantitative data.</li> <li>• Operationalisation and measurement.</li> <li>• Large samples.</li> <li>• Generalisation.</li> <li>• Rigour and Validity.</li> </ul>	<ul style="list-style-type: none"> <li>• Generation and use of qualitative data.</li> <li>• Multiple methods / viewpoints.</li> <li>• Small in depth samples.</li> <li>• Context-bound understanding.</li> <li>• Trustworthiness, utility and triangulation.</li> </ul>

There are two major perspectives on research. The positivist that claims that all sciences, including the social sciences, are concerned with developing explanations in the form of universal laws or generalisations. Any phenomenon is explained by demonstrating that it is a specific case of some such law. The laws are of the form of constant conjunctions between events, or in the case of social sciences, statistical correlations or regularities (Blaikie, 1993). Whereby, the opposing view, the phenomenological approach, states that reality is socially constructed rather than objectively determined. The focus here is on inductively understanding what is happening and why, by collecting and understanding data from social interactions.

**Table 3-2: Selected research perspective (adapted from Behling, 1980 and Blaikie, 1993).**

Strategic Decision	Mainly Phenomenological.
<b>Reason</b>	<ul style="list-style-type: none"> <li>• The author has chosen to adopt a phenomenological research perspective.</li> <li>• The author's belief is that the organisational world is socially constructed and subjective and that the observer is part of the phenomena.</li> <li>• The investigation of strategy formation within organisations is clearly an enquiry into a social phenomenon. There are five main objections that could be raised against using a positivist approach in research of strategy formation within organisations (Behling, 1980): <ul style="list-style-type: none"> <li>• Uniqueness, such that general laws cannot be drawn.</li> <li>• Instability, as organisations change over time.</li> <li>• Sensitivity, as the subject of the study may change because it is aware that it is being studied.</li> <li>• Lack of realism, raises questions about the validity of the findings in unreal situations.</li> <li>• Epistemological differences, natural science seeks an understanding of cause and effect. Social science seeks to explain the significance or meaning of phenomena.</li> </ul> </li> </ul>

### 3.3 Research Purpose

Having identified the most appropriate research perspective to adopt for one's research inquiry the next consideration is establishing the reason for carrying out a research study. Robson (1993) states that in addition to the desire to make a contribution to knowledge the purpose of the research may be to either explore, to explain or to describe a particular event or situation.

*Exploratory* research by its nature is exploring subject areas looking for new insights. It is trying to find out what is happening and asking questions of new and emerging subjects. Generally it is qualitative in its approach.

*Explanatory* research seeks to explain an established situation. This may be in the form of a problem and will use both qualitative and quantitative data to provide an explanation for the cause of the problem.

*Descriptive* research portrays an accurate profile of a person, activity or condition. The researcher must have substantial knowledge of the situation to assist in gathering information to conduct the research. Both qualitative and quantitative data is used.

**Table 3-3: Selected research purpose (adapted from Robson, 1993)**

Purpose of Enquiry	Exploratory and Descriptive
Reasons	<p><b>Exploratory because the research:</b></p> <ul style="list-style-type: none"> <li>• Sought new insights from complexity theory.</li> <li>• Asked emerging questions.</li> <li>• Assessed phenomena in a new light.</li> <li>• Was based mainly on qualitative data.</li> </ul> <p><b>Descriptive because the research:</b></p> <ul style="list-style-type: none"> <li>• Portrayed an accurate profile of persons, events or situations.</li> <li>• Methodologies and tools were developed and tested in organisations as a means of validating the conceptual framework.</li> </ul>

### 3.4 Research Strategy

Robson (1993) states that it is satisfactory to consider three main research strategies; Case Study, Experiment, and Survey.

**Experiments** entail the testing of theories and hypotheses systematically. The researcher is able to control and fix all possible variables within a controlled environment (usually laboratory). The researcher is then able to manipulate the variables and measure the effect of the change. Experiments occur through the direct intervention of the researcher under laboratory conditions (Gill and Johnson, 1991).

**Surveys** entail gathering information from a segment of the larger population to understand something about that population. This method usually employs the use of a standardised questionnaire or / and a structured interview, with standard questions (Robson, 1993).

**Case studies**, as defined by Robson (1993), are empirical investigations “*of a particular contemporary phenomenon within its real life context using multiple sources of evidence.*” The case studied can be virtually anything, involving one person, a group of people, an institution, or an innovation. The purpose is to develop detailed information and understanding about a single ‘case’ or of a small number of related ‘cases’ (Yin, 1989). The method of data collection is via a number of techniques for example, interviews, observation, and workshops.

**Table 3-4: Research strategy selected (adapted from Robson, 1993; Yin, 1994, Hartley, 1994 and Behling, 1980)**

Strategic Decision	A hybrid or combined strategy based on Case Studies and Surveys
Reasons	<ul style="list-style-type: none"> <li>Experiments are ruled out since there is lack of realism. In investigating the strategy formation process within organisations it may be impossible to recognise, control or manipulate some key variables – for example, the economic climate in which the researcher performs the study.</li> <li>Hartley (1994) claims that case studies are ‘meaningful’ and ‘rich’ compared with the sometimes ‘dustbowl’ empiricism of quantitative techniques. Surveys and Case Studies will be used as multiple methods to establish different views of the phenomena.</li> </ul>

### 3.4.1 Pure, Applied and Action Research

*“One begins with the assumption that one cannot understand a human system without trying to change it. The essential dynamics of the system are assumed to remain invisible to the passive observer. Only by becoming a member of the system and learning over a long period of time how it operates could the passive observer decipher it” (Schein, 1989).*

Traditionally research has been classified into two types - pure and applied – and it was generally considered that pure research supplies the theories and applied research uses and tests them out in the real world.

**Pure** research attempts to expand the limits of knowledge rather than directly involving the researcher in a particular, pragmatic problem (Zikmund, 1991). The key factor of pure research is that it is intended to lead to theoretical developments, that may or may not have any practical implications with results often disseminated across an academic audience (Robson, 1993).

**Applied** research is conducted when a decision must be made about a specific real-world problem, and is aimed at answering specific questions or in deciding on a particular course of action (Zikmund, 1991). Dissemination is often to both academic and industrial audiences, and is seen to be more pragmatic in its approach.

Robson (1993) points out however that this categorisation is too rigid to characterise what happens in most academic disciplines, where, for example, real world research generates its own concepts and does not just rely on the application of ‘pure theories’. This leads to the third element of research, known as **Action** Research, which assumes that research should lead to change, and that change should be incorporated into the research process. It rests on the notion that to understand something well, you should try changing it, and understand how a phenomenon develops over time.



**Table 3-5: Research type selected (adapted from Robson, 1993; Yin, 1994; Foster, 1972 and Eden and Huxham, 1996)**

Research Classification	Applied and Action Research
<b>Reasons</b>	<ul style="list-style-type: none"> <li>• Applied research since the research will be conducted about a specific real world problem.</li> <li>• Action Research since some new concepts will be generated and tested. The author will be involved in working with members of the organisations over a matter which is of genuine concern to them and in which there is intent by the organisation members to take action based on intervention. The research will not rely purely on the application of 'pure theories'.</li> </ul>

### ***3.4.2 The Selected Research Approach***

The selected research approach is summarised in Figure 3-2. The research adopts a hybrid or combined strategy based on case study and survey approach, which involves an exploratory and descriptive study. This adopts the collection of qualitative data from a variety of sources through applied and action research. An exploratory approach was chosen as the research sought to gain new insight from theory, and assessed the strategy management field from a new perspective, which involved asking emerging and exploratory questions. A descriptive approach was also applicable as the research involved the collection of data that portrayed an accurate profile of persons, events and situations. Case studies and surveys were used as an approach that allowed for the collection of rich and meaningful data from a multiple of qualitative sources such as interviews, workshops and questionnaires. The research is defined as both applied and action orientated in type. It can be described as applied, as it was carried out mainly in the context of the real world i.e. in an organisational setting, dealing with a real world problem where the results are of interest both to the academic and industrial audience. It can also be defined as action research as some new concepts and models were generated and tested in an organisational setting working with the members of the organisation to solve a genuine problem.

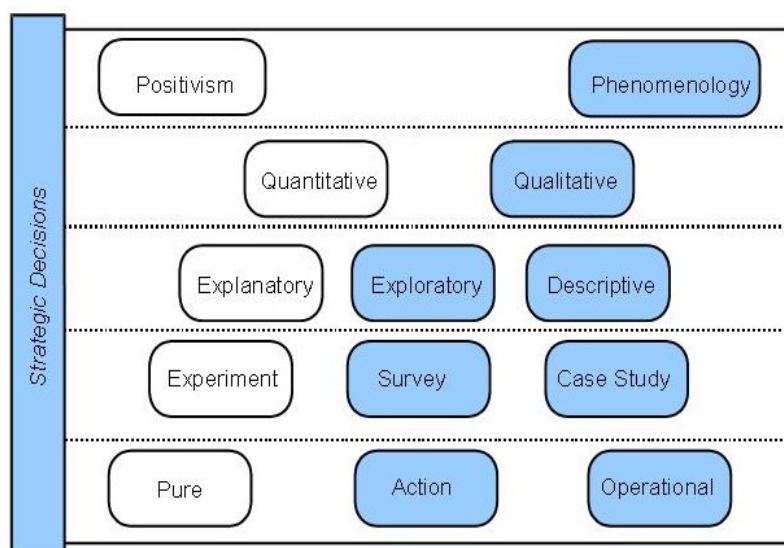


Figure 3-2: Selected research approach

### 3.5 Data Collection

There are two distinct models for data collection and analysis. The first states that the data is collected and then analysed and the second model states that data collection and analysis can happen concurrently (Robson, 1993). The two approaches are shown in Table 3-6, the first as a positivist, quantitative approach and the second as a phenomenologist, qualitative approach.

The quantitative approach is deemed as the ‘scientific’ approach (Robson, 1993). The research starts with the development of a hypothesis, from the theory, that requires testing. Testing the hypothesis involves experiments or other forms of empirical inquiry. This approach is very much involved with facts and figures and the use of measurable data and quantities.

**Table 3-6: Comparison of quantitative and qualitative data collection methods. (Bouma and Atkinson, 1995)**

Aspect of Research	Quantitative	Qualitative
<b>Relationship between researcher and subject</b>	<ul style="list-style-type: none"> <li>• Distant</li> </ul>	<ul style="list-style-type: none"> <li>• Close</li> </ul>
<b>Research strategy</b>	<ul style="list-style-type: none"> <li>• Structured</li> </ul>	<ul style="list-style-type: none"> <li>• Unstructured</li> </ul>
<b>Nature of data</b>	<ul style="list-style-type: none"> <li>• Hard</li> <li>• Reliable</li> </ul>	<ul style="list-style-type: none"> <li>• Rich</li> <li>• Deep</li> </ul>
<b>Relationship between theory and research</b>	<ul style="list-style-type: none"> <li>• Confirmation</li> </ul>	<ul style="list-style-type: none"> <li>• Emergent</li> </ul>

The qualitative approach differs in that theory and concepts tend to arise from the inquiry, coming after data collection rather than before (Robson, 1993). In general,

qualitative studies can be defined as any kind of research that produces findings that have not been arrived at by statistical procedures or other means of quantification (Strauss and Corbin, 1998). The research often deals with human issues, and is conducted through contact with field or life situations. This can be reflecting on the life of individuals, groups, societies, and organisations (Miles and Huberman, 1994). The researcher may often start with a research question or concept alone, and then allows an initial period of research to assist in developing hypotheses (Robson, 1993).

**Table 3-7: Selected data type (adapted from Robson, 1993; Yin, 1994 and Becker and Geer, 1982)**

Strategic Decision	Mainly Qualitative, partially Quantitative
<b>Reasons</b>	<ul style="list-style-type: none"> <li>Due to the type of research question, amount of resources and availability of data, a multi data type approach will be taken relying mainly on Qualitative data but with some quantitative data. The analysis of qualitative data will enable to unfold complex situation from small samples.</li> </ul>

### 3.5.1 *Qualitative Data Collection Techniques*

Several data collection techniques appropriate to a qualitative inquiry were considered for this research study. These are outlined below and the chosen techniques for the study are identified in the relevant sections.

#### **Interviews**

Robson (1993) describes interviews as a form of conversation with a purpose. There are several types of interviews, which are based on the degree of structure and formality. They vary from being highly structured to free range conversations using closed and open-ended questions respectively (Yin, 1989).

The fully structured interview has predetermined questions and responses in a predetermined order. The interviewer will ask the respondent a series of pre-established questions with a limited set of response categories. This is similar to an interview administered questionnaire (Fontana and Frey, 1994; in Denzin and Lincoln, 1994). All respondents receive the same set of questions, asked in the same order, with little room for variation in responses. This method benefits from being highly reliable in terms of a standardised set of responses which are easy to compare. A disadvantage is that it does not allow for an investigative conversation to develop which limits the amount of rich data that can emerge.

A semi-structured interview is where the researcher has prepared a number of interview questions in advance, when and where the questions are used in the interview is determined by the interviewer and he/she has the ability to adapt these depending on the responses of the interviewee (Wengraff, 2001). The ability to improvise in an interview is very difficult and the researcher needs to be well prepared, as predicting the interviewees' responses to a question is virtually impossible. Wengraff (2001) states that "most of the informant's responses can't be predicted in advance and you as interviewer therefore have to improvise probably half – and maybe 80% or more – of your responses to what they say in response to your initial prepared question" (p. 5). He

goes on to add that the ability to improvise requires a high degree of training and mental preparation. To be successful, he believes semi structured interviews require:

- As much preparation as structured interviews before the session.
- More discipline and creativity than structured interviews.
- More time for analysis and interpretation after the session than structured interviews.

The unstructured interview requires the researcher to go into the interview without a predetermined set of questions or an interview schedule. It provides a greater breadth than other types as it is qualitative in nature (Fontana and Frey, 1994: in Denzin and Lincoln, 1994) and the content of the interview is usually guided by the responses of the previous question. The benefit of an unstructured interview is that the data collected is usually rich and authentic containing revealing information (Eysenck, 1998). It is also a good way of establishing a relationship with the respondent. Robson (1993) states that a disadvantage of the method is the difficulty of comparing interviews and responses with each other as each interview will have been slightly different. Another disadvantage is that the lack of structure could lead to a collection of irrelevant information for the interviewer. It is recommended that this type of interview be used if there is an opportunity to hold more interviews with the respondent. An initial unstructured interview is then a sound way to establish a good relationship with the interviewee (it can act as an ice breaking exercise). The remaining interview(s) should then be more structured.

### **Workshops / Focus Groups**

Workshops, sometimes described as focus groups, are a method of discussing issues around a particular subject with a specific group of participants. It is a means by which a group can work on or explore specific issues and problems in order to learn or acquire more information (Gilgeous, 1995). Krueger and Casey (2000) state that the purpose of a focus group *“is to listen and gather information”* and that it is a *“way to understand how people feel or think about an issue, product, or service”* (pg. 4). In an academic setting, the workshop can provide a primary or secondary data collection source for the researcher. In this situation the goal is to collect data that is of interest to the researcher and gain further insights around a research area (Krueger and Casey, 2000). For the purpose of a data collection technique it is necessary to plan and develop questions around the subject area to prompt group discussions and to ensure that the relevant data is collected. Krueger and Casey (2000) state that focus groups have distinctive characteristics, these are:

- They involve homogenous people in a social interaction.
- Their purpose is to collect qualitative data from a focused discussion.
- They are a qualitative approach to gathering information that is both inductive and naturalistic.

The actual workshop process can be designed in various ways but in general it involves a small group of people (6-10) in an informal, relaxed, face-to-face setting. The aim is

to achieve common intellectual goals through active participation in the discussion of a certain subject or concept. The workshop should be designed in advance establishing a clear agenda and defining the desired outcomes of the event. Data is collected through various workshop techniques, for example through group brainstorming and on post it<sup>®</sup> notes. The workshop process is active and encourages participation from all members. Ideally there should be a group facilitator who guides the conversation and structure of the process so that the data gathered is applicable to the research subject.

Using workshops as a method to generate data and information has several advantages. In comparison to a standard interviewing process the workshop tends to provide a more open setting for participants as well as offering more excitement and stimulation with regards to interaction with other people (Lettice, 1996). This in turn encourages debate and discussion, resulting in new ideas and rich data from multiple perspectives. The process allows the researcher to gain a good understanding of the research area and the ability to explore, with experts, issues of interest that arise during the workshop.

However there are some drawbacks that the researcher needs to be aware of when using workshops, so that they can be minimised. Workshops are time consuming and it is not uncommon to run a workshop for a day or two. It is difficult for participants to justify taking this time out from their regular working day. As a compromise it often means shortening the workshop and thus covering fewer questions or covering the issues in less detail. The workshops run a risk of producing high level information, this problem can be minimised by having clear and focused questions for the participants, a facilitator who understands what the important issues are, enough time to develop deep discussions and having participants knowledgeable in the research area. A skilled facilitator is often needed to run a workshop to deal with issues such as a difficult participant influencing the running of the workshop, or one or two dominant participants influencing the opinions of weaker group members. The facilitator's role also means ensuring that all questions are covered and that interesting issues are picked up on and discussed thoroughly. This is a difficult, all encompassing role and it is recommended that the researcher is trained in facilitation, or that a trained facilitator is brought in.

### Literature Review

For a research inquiry, a literature review is sometimes considered as the logical starting point (Hart, 1998). The purpose is to gather information on the area under investigation so that the researcher can gain knowledge about the subject area. It is also important in narrowing down the scope of the research by identifying the gaps in current knowledge thus helping to focus the research questions for the inquiry (Robson, 1993). Hart (1998) defines a literature review as "*The selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being processed*" (pg. 13). Robson (1993) states that the academic tradition of conducting a literature review as the foundation for the inquiry and at the beginning of the study may not always apply to real world studies. He argues that research literature can provide a background resource to the researcher

rather than the essential starting point for the research designs. This view places more emphasis on the client group and the additional information available at a practitioner level that could help guide the research design. Robson (1993) states that a “*good understanding about what is already known, or established, does not then have the absolutely central role in applied real world enquiry that it does in fundamental, discipline-developing research*” (pg. 23) but he believes that it is still very important. It is necessary therefore to have a strategy for collecting and recording the information gathered from the various literature sources available in the inquiry and a clear understanding of why one should do this. Strauss and Corbin (1990, pg. 50 – 53) suggest that existing literature can be used for five purposes in qualitative research:

- *To stimulate theoretical sensitivity* – by providing concepts and relationships that can be compared to the actual data collected.
- *To provide secondary sources of data* – to be used perhaps as initial hypotheses testing of the researchers’ concepts and ideas.
- To stimulate questions during data gathering and data analysis.
- *To direct theoretical sampling* – to guide the researcher as to where to go to uncover phenomena that are important for theory development.
- *To be used as supplementary validation* – to explain why the findings support or differ from the existing literature.

There is a danger for researchers to treat the literature review as a separate entity in their research thesis and that it is done simply to show that the researcher knows the area (Silverman, 2000). Wolcott (1990) states that “*I expect my students to know the relevant literature, but I do not want them to lump it all into one chapter that remains unconnected to the rest of the study. I want them to draw upon the literature selectively and appropriately as needed in the telling of their story*” (pg. 17). Silverman (2000) stipulates that the literature review should combine knowledge with critical thought and should be written mainly after the data analysis is completed. He argues that until the researcher has conducted the data analysis he/she will not know what literature is relevant. This does not mean that no literature review should be conducted at the early stages, as it is necessary to gain an understanding of the field, but that the bulk of the reading and documentation is best done concurrently with data collection and analysis.

### Observational Methods

The actions and behaviour of people is an important aspect in social inquiry therefore a technique that observes what people do in their real life setting and then recording this in some descriptive way for analysis is naturally appealing (Robson, 1993). However, this technique is highly subjective as it involves describing somebody else’s actions using one’s own perceptions and biases. Patton (1990) states that “*scientific inquiry using observational methods requires disciplined training and rigorous preparation*” (pg. 200). Robson (1993) describes two very different types of observational methods; participant observation (described as a qualitative style, with roots in anthropology studies) and structured observation (which is a quantitative style used in a variety of disciplines). Robson (1993) states that observation can take on a variety of forms and be used for several purposes in a study; these are outlined in Table 3-8.

**Table 3-8: Purpose and use of observation in an inquiry (Robson, 1993)**

Observation use	Observation purpose
<b>Exploratory phase</b>	<ul style="list-style-type: none"> <li>• To find out what is going on in a situation.</li> <li>• Unstructured form.</li> <li>• A precursor to subsequent testing of insights.</li> </ul>
<b>Supportive or Supplementary data collection technique</b>	<ul style="list-style-type: none"> <li>• To complement or set in perspective data obtained by other means.</li> <li>• Validate or corroborate insights obtained by other techniques i.e. interviews.</li> <li>• Can be used as a primary method particularly in a research study of descriptive purpose.</li> </ul>
<b>Experimental research</b>	<ul style="list-style-type: none"> <li>• Used within the context of a controlled experiment as direct observation of laboratory experiment or in field research.</li> </ul>

The driving force for the observational data collection method is what the researcher is trying to find out from the situation, this is guided by the research questions. The researcher also needs to decide what type of information to collect during the observation period. Robson (1993) outlines two types of information; these are narrative accounts and coded schedules. The narrative accounts involve informal information gathering, in an unstructured qualitative manner, where the researcher has considerable freedom. The coded schedules are more formal and structured where the researcher has a clear direction of what is to be observed and is only concerned with pre-specified subjects and all other occurrences are irrelevant (Robson, 1993).

The role of the observer in an inquiry can vary greatly; the two extremes are that of the participant observer – a researcher who participates fully with the intention of becoming a fully accepted member of the group, and the pure observer – who seeks to be unnoticed and in the background. The different roles within participation observation are described in Table 3-9.

**Table 3-9: The role of the observer in a participant inquiry (adapted from Robson, 1993)**

Role of Observer	Description	Comments
<b>The complete participant</b>	<ul style="list-style-type: none"> <li>• Conceals that they are an observer.</li> <li>• Seeking to become a full member of the group.</li> </ul>	<ul style="list-style-type: none"> <li>• Deliberate and planned deceit of group members.</li> <li>• Unethical.</li> <li>• Used within undercover police/government operations.</li> </ul>
<b>The participant as observer</b>	<ul style="list-style-type: none"> <li>• The group is told from the start that they are being observed.</li> <li>• Observer seeks to gain the trust from the group and build relationships.</li> </ul>	<ul style="list-style-type: none"> <li>• Not easy to maintain dual role of observer and group member.</li> <li>• Dependent on many variables i.e. cultural, gender etc.</li> </ul>
<b>The marginal participant</b>	<ul style="list-style-type: none"> <li>• Lower degree of participation.</li> <li>• Largely a passive member but striving for complete acceptance.</li> </ul>	<ul style="list-style-type: none"> <li>• Some marginal roles can be undistinguishable from the complete participant observer.</li> </ul>
<b>The observer-as-participant</b>	<ul style="list-style-type: none"> <li>• The group know that the researcher is there to observe them.</li> <li>• The observer takes no part in the group activity.</li> </ul>	<ul style="list-style-type: none"> <li>• The observer's presence is still affecting the group dynamics, therefore to claim no participation in group activity is arguable.</li> </ul>

It is possible to take a more structured approach to observation which sees the researcher as taking a detached, pure observer position and using a quantitative systematic observation method which involves the development of coding schemes as a way of quantifying behaviour. This is in contrast to the described participant observer technique which uses primarily qualitative techniques and is somewhat unstructured and has a narrative form of recording human behaviour.

In conclusion, the participant observation method can be said to be appropriate for real life situations, as it is a technique that allows the researcher to become directly involved in the phenomenon under investigation. This overcomes the artificiality issue of interviews and questionnaires where respondents could be ticking boxes and tailoring their response to make themselves look good or to please the interviewer (Robson, 1993). Conversely the approach has been criticised as it is difficult to ascertain as to what degree an observer affects the situation and the technique is often time consuming. The biggest debate surrounds the subjectivity of the method. Once it is accepted that the observer can only observe the situation through his/her own interpretations then measures can be taken to limit personal bias and the subjectivity of the data (Robson, 1993).

### Survey / Questionnaire

A survey is a research method which gathers information from a number of individuals - the sample - in a standard, robust way, in order to learn something about the larger population from which the sample has been drawn (Ferber *et al*, 2000). Surveys come in many different forms and have a wide variety of purposes, but they do have certain



characteristics in common (Robson, 1993). In an authentic survey, samples are scientifically chosen so that each individual in the population has a known chance of selection. In this way, the results can be reliably projected to the larger public. Typically, information is collected by means of standardised questions so that every individual surveyed responds to exactly the same question. The survey's intent is not to describe the particular individuals who by chance are part of the sample, but to obtain a statistical profile of the whole population (Gill and Johnson, 1991). The sample size required for a survey will depend on the reliability of the results required, the size of the population, and on how the results will be used. Surveys provide a speedy and economical means of collecting data about a population – they are simple to administer, quick to distribute, and can easily be reused. Responses can be generalised to other members of the population and are often applicable to other similar populations. The survey methodology enables specific theoretical propositions to be tested in an objective fashion and can be used to confirm and quantify the findings of qualitative research (Zikmund, 1991). However, surveys are just a snapshot of behaviour at one place and at one time, and it is dangerous to assume that they are valid in any other contexts (Gill and Johnson, 1991). In addition, response rates from surveys are often poor and can lead to inaccurate sampling of the population.

Table 3-10 outlines the data collection techniques used in this research study and the context in which they were used.

**Table 3-10: Data collection techniques adopted in the research study**

Data collection techniques used	context used
<b>Interviews</b>	<ul style="list-style-type: none"> <li>Within the overall research design interviews were used at several phases in the research. Within the action research, case study and survey approach interviews were the main source for gathering information and input from the organisations.</li> </ul>
<b>Workshops</b>	<ul style="list-style-type: none"> <li>During the action research phase workshops were conducted with the organisation members to validate and populate Mintzberg's (1987) model. Workshops were also used to make interventions in the strategy formation processes of HiCo based on the authors new theories.</li> </ul>
<b>Questionnaires</b>	<ul style="list-style-type: none"> <li>Detailed questions were asked in the Survey phase of the research to gather information from a wide sample of respondents.</li> </ul>
<b>Observation</b>	<ul style="list-style-type: none"> <li>Throughout the action research phase of the study the author was continually observing the organisation, its people and its processes. The author took the role of observer as participant.</li> </ul>
<b>Documents</b>	<ul style="list-style-type: none"> <li>Whenever possible the author validated the research through the gathering of additional organisational documentation.</li> </ul>

### 3.6 Research Design

The following section deals with the research design in terms of how the chosen research approach was implemented. The section describes the chosen strategy, methods and sources.

### 3.6.1 Use of Multiple Methods and Sources

Using more than one method or source in investigation can have substantial advantages. Robson (1993) points to the following advantages:

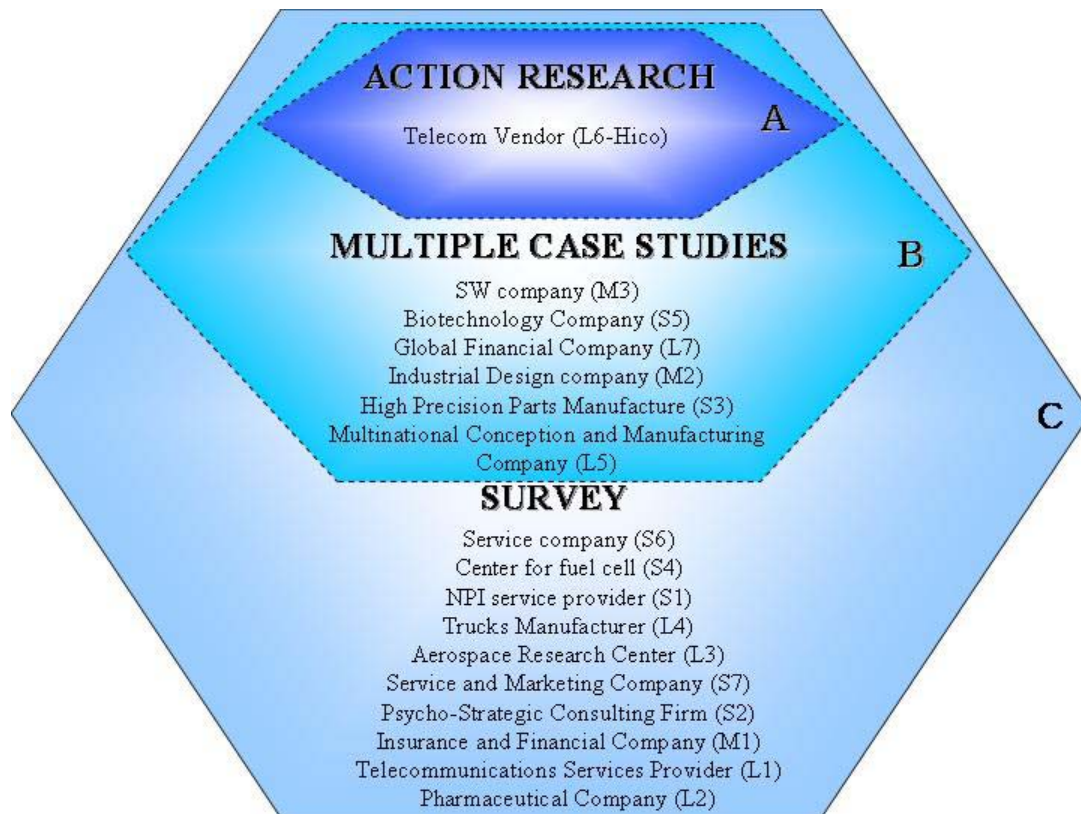
- Reduction of inappropriate certainty – Using additional methods may point to differing answers, which remove specious certainty.
- Triangulation – a method of finding out where something is by getting a ‘fix’ on it from two or more places.
- Complementary purposes – use of different methods for alternative tasks (good for initial exploratory research).
- Enhance Interpretability – multiple methods used in a complementary fashion.
- Assess the plausibility of threats to validity (a particular pattern of findings and context from one method can leave interpretation open to particular ‘threat’).

The research was conducted using multiple methods and sources within and from various environments (Figure 3-3). The planned methods were survey, case study and action research. A literature review was conducted in parallel with the research.

	Group A Group B Group C	Group A Group B	Group A
Survey	⊗		
Case Study		⊗	
Action Research			⊗
Literature Review			

**Figure 3-3: Multiple methods and sources**

The source of data includes three populations – referred here as group A, group B and group C - consisting of 17 companies from 13 industries of small, medium and large size and based in 8 countries (Figure 3-4).



**Figure 3-4: List of researched companies by group**

Figure 3-4 outlines the three different research strategies adopted and the number and type of companies that participated in each group. In group A an in-depth case study strategy was adopted within HiCo using a two year action research project. This is described in more detail in Chapter 4. In group B, 6 companies participated in a multiple case study strategy which involved collecting data using multiple sources within these companies. Finally, group C consists of the whole sample of organisations where a survey approach was adopted.

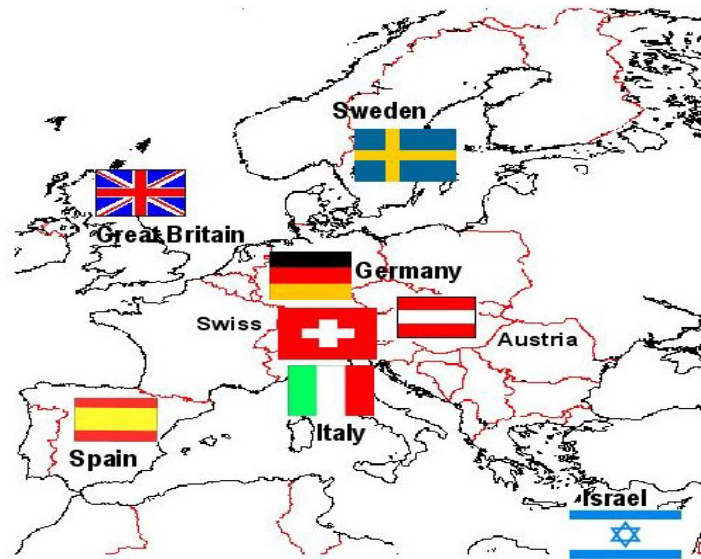


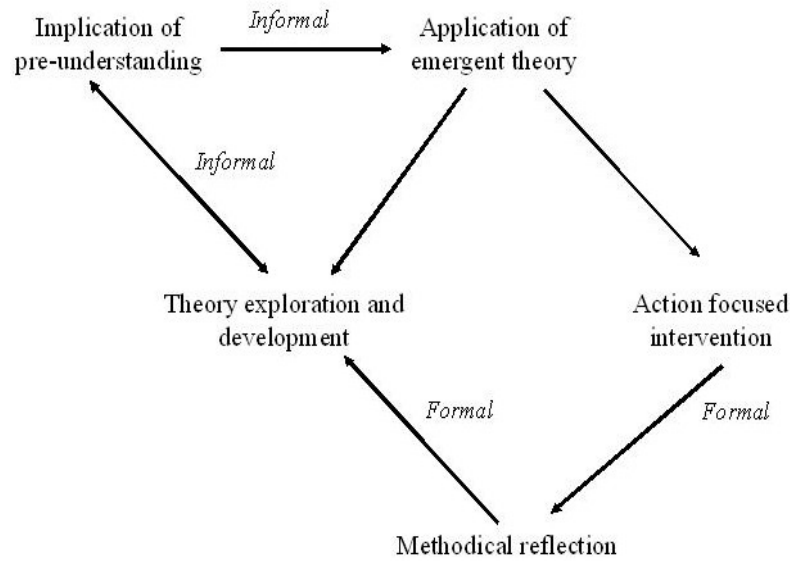
Figure 3-5: Geographical distribution of the 17 researched companies

The eight countries involved in the research were Germany, Austria, Israel, Great Britain, Spain, Italy and Switzerland (Figure 3-5).

### 3.6.2 Action Research – HiCo (Group A)

This piece of research took place between 2002 and 2004 and the aim was to experience, first hand, a strategy formation process in a turbulent environment as well as to test some of the emerging ideas from the research. HiCo is a large half a billion dollars technologies intensive company, with global sales in more than 100 countries, and consists of several SBUs (Strategic Business Units) and RBUs (Regional Business Units). The research in HiCo was both at the corporate strategic levels and SBU level, and was conducted through a combination of participant observation, structured workshops, interviews and diary records and document study. In total the data collection consisted of 14 workshops, 4 interviews, 15 corporate Strategy Forum official meetings, 21-business unit management or other substantial meetings (Appendix A and B).

The author's aim from the action research was to develop and elaborate theory from practice. Figure 3-6 describes the cyclic nature used in the research.



**Figure 3-6: The cyclical process of action research (Eden and Huxham, 1996)**

HiCo action research (group A) served in a continuous interactive way for testing research ideas as well as a source of generating new emerging ideas. The author consults with HiCo (a half a billion revenue Hi-tech company) as a consultant to the corporate strategy formation process. New ideas from literature review and research initial findings were tested in the action research and new questions and ideas emerged from the process.

Based on several action research characteristics provide by Eden and Huxham (1996) the following design analysis was conducted (Table 3-11).

**Table 3-11: General and specific characteristics of Action Research (based on Eden and Huxham, 1996)**

General Action research Characteristic	Actual Action Characteristic
<ul style="list-style-type: none"> <li>Action research demands an integral involvement by the researcher</li> </ul>	<ul style="list-style-type: none"> <li>The author had the mandate to shape the process and be involved as facilitator in all aspects.</li> </ul>
<ul style="list-style-type: none"> <li>As well as being useable in everyday life action research demands valuing theory</li> </ul>	<ul style="list-style-type: none"> <li>It was possible to fulfil the requirements of the customer and at the same time consider the more theoretical implications. Reporting and discussing progress with academic colleagues and supervisor helped to look at things in perspective.</li> </ul>
<ul style="list-style-type: none"> <li>Theory building, as a result of action research, will be incremental, moving through a cycle of developing theory to action to reflection to developing theory, from the particular to the general in small steps</li> </ul>	<ul style="list-style-type: none"> <li>Since this research was based on multiple methods and sources used in sequence and in parallel, the feedback loop included external inputs to the action research, allowing larger possible steps, or at least more solid ones.</li> </ul>
<ul style="list-style-type: none"> <li>For action research, the processes of exploration of the data – rather than the collection of the data – in the detecting of emerging theories and development of existing theories must either be replicable or, at least, capable of being explained to others</li> </ul>	<ul style="list-style-type: none"> <li>A diary was kept along the research period documenting motivation, thoughts, actions etc. The information complemented the data collection and shed light on various issues.</li> </ul>
<ul style="list-style-type: none"> <li>Action research requires that the theory development which is of general value is disseminated in such a way as to be of interest to an audience wider involved with the action and/or with the research</li> </ul>	<ul style="list-style-type: none"> <li>The researcher used action research to provide a rich source of examples and stories to illustrate the theory.</li> <li>Photographs were also taken.</li> </ul>

### 3.6.3 Multiple Case Studies (Group B)

A multiple case study approach was adopted for conducting an empirical inquiry that investigated the strategy formation process in six different companies within their real-life contexts. Companies projected their perceived position on the conceptually developed Strategy Formation Matrix (Chapter 5) for the purposes of validating the model and as a basis for further expansion.

The six companies in the multiple-cases study, presented in Table 3-12, were chosen based on their diversified characteristics in terms of size, line of business and geographical origin (all European based).

**Table 3-12: List of researched companies within the multiple cases study**

Company	Size	Short Name	Section
<b>Multinational Conception and Manufacturing Company</b>	Large	L5	6.2
<b>Global Financial Company</b>	Large	L7	6.3
<b>Industrial Design company</b>	Medium	M2	6.4
<b>SW company</b>	Medium	M3	6.5
<b>High Precision Parts Manufacture</b>	Small	S3	6.6
<b>Biotechnology Company</b>	Small	S5	6.7

Data collection began on June 2002 and ended in February 2004, consisting of multiple sources from workshops, interviews, surveys, internal documents and external documents – for example newspapers and Internet sites. The investigation is described in more detail in Chapter 6.

### **3.6.4 Survey (Group C)**

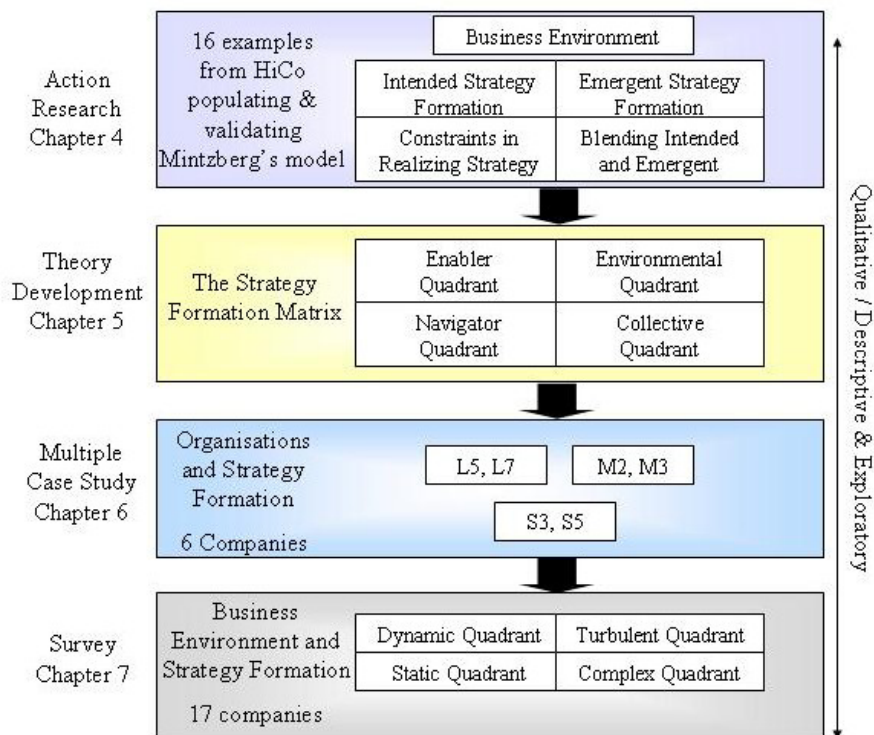
A further analysis was conducted to investigate how the business environment is related to the companies' perceived strategy formation process. The author adapted an existing model which he called the Business Environment Matrix and used a survey approach to investigate the role that the business environment played on the strategy formation process. As described earlier the survey approach entails gathering information from a segment of the larger population, employing the use of a several data collection methods (Robson, 1993). Data collection began on June 2002 and ended in February 2004. For this piece of research, multiple sources of data were used, such as workshops, interviews, surveys, internal documents and external documents (such as newspapers and the Internet) and the whole sample of companies participated. Data collection included:

- An initial background survey, these involved interviews with six organisations. Background on the rest was gathered by other means i.e. through documentation (Appendix C).
- MENI (Management role Environment and Networking Importance) analysis. The data was gathered through workshops with nine organisations (Appendix E) and through semi structured interviews with the eight remaining organisations (Appendix D).
- A strategy formation process workshop analysis with nine of the organisations (Appendix F).
- A context analysis workshop with five of the organisations (Appendix G).

- An industry structure analysis with two of the organisations (Appendix H).

Along the course of the research several discussions were held with company's managers for clarifications and sense making. The investigation is outlined in greater detail in Chapter 7.

Figure 3-7 summarises the research design adopted within this inquiry. The action research stage of the study involved populating Mintzberg's (1987) strategy model through examples and information derived from real life within the HiCo case company. Following this stage the author developed a matrix, based on the action research study and from literature, which was named the Strategy Formation Matrix. Multiple case studies were then carried out to populate the Matrix using data from six different size and type organisations. The data collection phase was completed by the development and populating of a Matrix that allowed the mapping of the organisations' Business Environment in the context of Strategy Formation. This phase was carried out through a survey research approach using multiple methods for gathering the data within 17 organisations.



**Figure 3-7: Research design**

Table 3-13 outlines the volume and intensity of the data collection across the three populations (groups A, B and C).



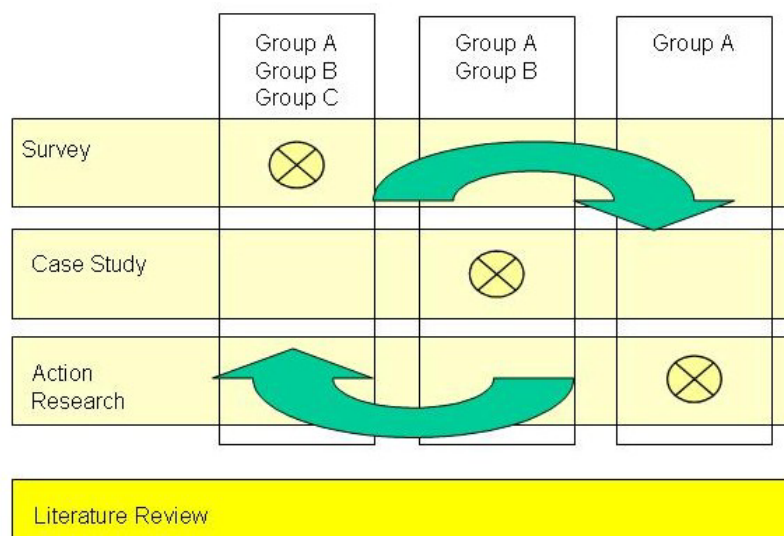
**Table 3-13: Data collection**

	Data collection Method	Estimated Number of Hours	Time scale
<b>Action research (Group A)</b>	4 interviews	11 hours	August 2002 -February 2004
	14 workshops	28 hours	
	35 observation (meetings)	96 hours	
	Documents (internal + external)		
<b>Multiple Case Studies (Group B)</b>	6 interviews	12 hours	June 2002 - February 2004
	4 workshops	19 hours	
	Documents (internal + external)		
<b>Case Studies (Survey C)</b>	14 interviews	14 hours	October 2002 – March 2003 (for seven companies)  June 2002 – February 2004 (for three companies that were also active in the RODEO project and attended some of group B activities)
	4 workshops	12 hours	
	Documents (internal + external)		

### 3.6.5 Exploration, Expansion and Validation

Silverman (2000) states that crucial to a social inquiry are the researcher's ability to show that the methods used were reliable and that the conclusions are valid. Yin (1994) identifies three forms of validity relevant to exploratory research – construct validity, external validity and reliability. Construct validity is described as the degree of certainty one has that the phenomenon has been appropriately measured and studied. External validity concerns the extent of confidence one has that the findings can be generalised beyond the immediate case. Reliability concerns the researcher's conviction that the research and its findings are repeatable.

The three approaches adopted (action research, case study and survey) by the author were not carried out in a linear, sequential fashion, rather the approach took on an iterative design. This helped to move the research and the author's perceptions forward to improve the overall research design process. Figure 3-8 describes how this process worked.



**Figure 3-8: Exploration, Expansion and Validation**

The use of these multiple data sources helped to strengthen the overall outcomes of the research. This issue of research validity and reliability is addressed in the final sections of each Chapter as the author reflects on the research design taken and its strengths and limitations.

### 3.6.6 Data Analysis

The research consisted of quantitative and qualitative data analysis. The quantitative data analysis consisted of building a computerised database of rows and columns where each row corresponded to a *case*. The cells in a column contained the data for a particular *variable*. Robson (1993) suggests direct '*keying*' of data analysis software for small-scale enquiries where automatic reading is neither possible nor economically justifiable. The analysis included cross-tabulation, statistical significance tests, frequency distributions and graphical displays. The computerised database included additional information on industry type, company size, location (country of main office), date of data collection and referred date, in terms of years. Different queries were run against the database to assess the impact of different variables on the results. The results from the quantitative analysis are presented in Chapter 7.

The qualitative data was based on workshops, meetings, internal and external documents, interviews and an observation diary, enabling triangulation and cross analysis between the various sources. Yin (1994) offers four dominant analytical techniques. These are: pattern-matching, explanation building, time-series, and program-logic. The data collected was analysed on an ongoing basis. Miles and Huberman (1994) suggest that a researcher should be "*interweaving data collection and analysis from the start*". They state that it helps the researcher go back and forth between thinking about the existing data and generating strategies for collecting new and sometimes better data. They add that this approach enables the possibility of collecting new data to fill in the gaps that may emerge in the data or to test any hypotheses that may emerge. The analysis of the interview data adopted this approach

and involved developing the theoretical concepts from the data through coding. Once initial interview data was collected, the researcher began categorising the data by looking for patterns and themes. Other techniques adopted included putting data into different arrays, a matrix of categories, data displays (flowcharts), tabulating the frequency of different events and categorising information into chronological order. The themes that emerged from this analysis were triangulated across multiple sources and concepts, and the dominant themes that emerged are presented in this thesis, predominantly in Chapters 4 and 6.

### **3.7 Summary**

The purpose of this Chapter was to outline the different research approaches available for a social inquiry and describe the research design chosen for this study. In summary, the research was carried out in roughly three phases over a two year period (2002 – 2004). The first phase involved an action research study to validate the conceptually developed Strategy Formation Matrix (Chapter 5) and also to use the results as a basis for further expansion. The study enabled the author to experience first hand the strategy formation process and informed the further development of the model. The second phase involved a multiple case study approach for conducting an empirical inquiry to investigate the strategy formation process in six different companies within their real-life contexts. The author felt it was important to validate the conceptually developed Strategy Formation Matrix and asked companies to project their perceived position on the Matrix (Chapter 6). Finally a further analysis was conducted to investigate how the business environment related to the companies' perceived strategy formation process. The author adapted an existing model and called it the Business Environment Matrix (Chapter 7) and used a survey approach to investigate the role that the business environment played on the strategy formation process. This third phase enabled the author to develop the concepts further to include the business environment and test them in organisational settings.



## 4 Strategy Formation in HiCo

*This Chapter aims to explore and test emerging themes through the action research case study in HiCo. The Chapter outlines the principles of action research, describes the process of populating, validating and refining Mintzberg's (1987) model and concludes with the strength's and limitations of the research approach.*

### 4.1 Introduction

The purpose of this investigation was to further populate, validate and refine Mintzberg's (1987) model, which describes strategy formation as intended and emergent, using data from a real world environment. Within the case of HiCo, the author used sixteen examples from within HiCo, gathered through an action research approach, to investigate and gain a deeper understanding of the organisation type, environment, constraints and management role in the strategy formation process. The investigation also raised issues for further inquiry.

HiCo is a telecom vendor that provides advanced telecommunications solutions to leading carriers and service providers worldwide. HiCo employs over 3,000 people and produces a yearly turnover of over half a billion dollars. It consists of corporate units, several business units, regional sales offices located around the world and some subsidiaries. The author served as an internal consultant in HiCo for three years prior to the action research. The scope of work was focused on business processes (i.e. performance measurements, risk management and strategy formation). The author supported, to various degrees, the HiCo units and subsidiaries.

The action research was launched in August 2002, in terms of formal research data collection and analysis methods. However, information from previous periods, if available, is supplied for benchmarking and pattern recognition, supported by documentation. The action research duration was nineteen months and ended in

February 2004. The data collection consisted of 14 workshops, 4 interviews, 15 Corporate Strategy Forum meetings, and 21 business unit management or other substantial meetings (Appendix A and B). The company name and sensitive business information is altered or omitted for confidentiality reasons.

## 4.2 Principles of Action Research

As highlighted in Chapter 3, this phase of the research is conducted using an action research approach. Lincoln and Guba (1985) define the difference between the positivist and the constructivist viewpoint and the relationship between the researcher and the findings:

- Positivist version: the inquirer and the object of the inquiry are independent; the knower and the known constitute a discrete dualism.
- Constructivist version: the inquirer and the object of inquiry interact to influence on another; knower and known are inseparable.

Within this study the author adopted a constructivist stance with regards to the relationship between the researcher and the findings. The involvement of the researcher in generating meaning is central to an action research approach. Schein (1989) states that there is an assumption that understanding a human system can only come from trying to change that system, and that one must become a full member of that system to learn from and understand the changes that occur over a long period of time. Adopting this assumption it can be stated that the role of an action researcher is therefore active rather than passive. One deliberately instigates a change in order to understand the underlying principles and assumptions at work in a particular context.

Action research does have its critics; there is still a belief that because of this embroilment in the subject matter it is not accepted as 'real' research as fundamentalists believe that there must be a strict separation between science, research and action (Bannister, *et al.*, 1994). However this notion of action research is becoming increasingly accepted especially in the domain of 'real world' research. With more focus on industrial research and the attempt to bridge the gap between Mode 1 and Mode 2 types of research it is clear that practitioner research does have a valid place within academic research providing a rich source of intertwined data, action and practice (Bannister *et al.*, 1994).

As described by Robson (1993), Lewin coined the term action research in 1946. He discriminated problem-solving research from objective scientific research, by suggesting that researchers take on the role of actively promoting change rather than simply observing and explaining change. He concerned himself with the rights of the participants, particularly focusing on the power relations between the researcher and the researched. His initial formulation of the action research process was a spiral of cycles of planning, acting, observing and reflecting, however, the term action research has been used in somewhat different senses by later workers...but improvement and involvement seem central to all uses of the term (Robson, 1993).

Rapoport (1970) believed that action research has two purposes “*to contribute both to the practical concerns of people in problematic situations and to the goals of social science by joint collaboration within a mutually acceptable framework*”. Although Rapoport’s (1970) assumption that action research provides learning for the academic world has been challenged by advocates of a purely practitioner approach, it is central to the purpose of this thesis. The researcher makes two fundamental assumptions whilst conducting the work. Firstly, practitioners benefit from the concepts and insights developed through the pursuit of understanding and explanation by academics. Secondly, it is the application of such insights in a real world setting that generates greater understanding and the expansion of knowledge.

### 4.3 Populating and Validating Mintzberg’s (1987) Model

#### 4.3.1 Introduction

Mintzberg (1987) separates the definitions of strategy as plan (consciously intended course of action) and pattern (stream of actions). Plans may go **unrealised** while patterns may appear without preconception. A plan is labelled as **intended** and pattern as **realized** strategy, as shown in Figure 4-1, distinguishing deliberate strategies, where intentions that existed previously were realised, from emergent, where patterns developed in the absence of intentions, or despite them (which go unrealised).

Maclean and Macintosh (2003) provide the following description of emergent: “*Emergent properties appear as macroscopic patterns in collections of elements amongst which non-linear interactions take place. The non-linearity means that such patterns cannot be understood in terms of simple sums or differences of interactions between the elements but arise out ... of interconnectivity of the system in a way which makes cause and effect relationships difficult to characterise or predict. In essence, emergent properties exist at the level of the system, not at the level of the elements; they express a unity at the systems level which transcends differences amongst the elements, displaying them as features of an integrated whole*” (pg 153). Christensen and Raynor (2003) claim emergent strategy bubbles up from within the organisation in the cumulative effect of day-to-day prioritisation and investment decisions made by middle managers, engineers, salespeople, and financial staff. These tend to be tactical, day-to-day operating decisions that are made by people who are not of a visionary, futuristic, or strategic state of mind.

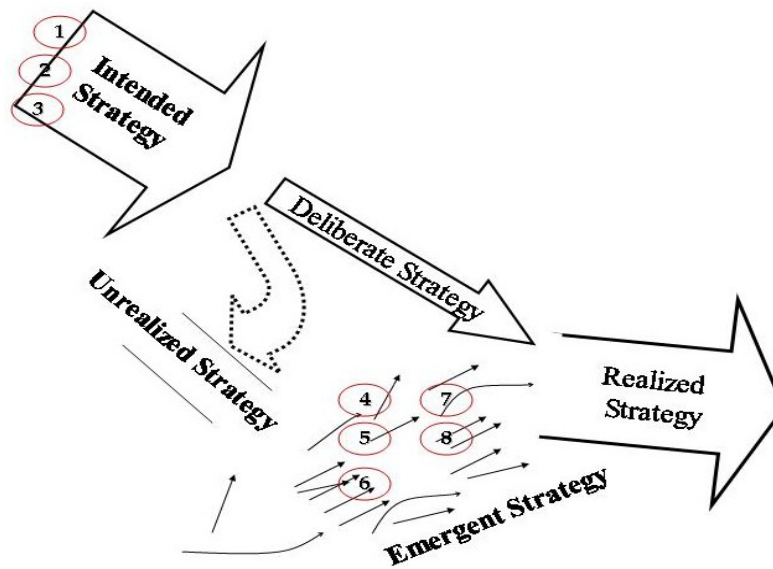


Figure 4-1: Mintzberg's (1987) model of intended and emergent strategy formation process and distribution of cases

This section investigates the outlined Mintzberg (1987) model through eight HiCo action research cases, in two subsections. These are outlined below.

#### **Intended Strategy:**

Case 1 - How long is "Long Term" planning

Case 2 - Strategic goals project

Case 3 - Seeking synergy between units

#### **Emergent Strategy:**

Case 4 - Competing and underground development

Case 5 - Co-creating the future with customers

Case 6 - The Clown who became king

Case 7 - Unexpected strategy formation process outcomes

Case 8 - Empowering employees

### **4.3.2 Intended Strategy Formation Process**

#### **Case 1: How long is "Long Term" planning**

Strategy formation processes are recognised by managers in HiCo as a process dealing with the Long Term outcome of the organisation, and the necessary derived actions for today to plan for the future.



In the research period, the author encountered several practical definitions of the term Long Term. The duration of the term depended mainly on the origin and the motivation of the strategy formation process. For example, in one case, when a sales activity in a large geographical region of the world was evaluated to justify its existence, a horizon of four years was used. At the end of 2003 a long-term business plan formation process was conducted based on a five year duration period, while at the beginning of the same year a corporate cross company strategy formation process was conducted without a clear scope of time frame.

The strategy formation output of a process conducted for example in business unit A in 2002 consisted of clear, long-term (4 years) recommendations concerning: business model, product positioning, geographical focus, sales channels, Research and Development (R&D) roadmap, re-organisation and new incentive plan. In 2004, a cross company committee was appointed to define HiCo's vision based on an outlook of six years.

In HiCo the average development turnaround of new product is roughly between one to two years, depending on the business unit and its type of products. Defining marketing requirements for new products after design and prior to the production and sales penetration period can extend new product launch for up to four years. Therefore R&D resource allocation at each phase has substantial impact on the long-term revenues, which means that defining a long-term road map is crucial. However the road map usually serves as a basis for the design and development process and flexibility is built in as it is assumed that change will occur in the form of new emerging short term needs (i.e. customer demand for new feature, new opportunity, budget or other constraints).

External analysts, for example, supply market research consisting of demand and technological trends, with forecasts of up to five years. However, in 2002 when the market was witnessing some turbulence and uncertainty, investment house and research centres reduced the frequency and the time frame of the market reports.

*Insights:*

⇒ *Long Term is a relative term dependent on the need of the organisation and the external business environment.*

## **Case 2: Strategic Goals Project**

At the beginning of 2002 the author was asked by the CEO of HiCo to launch a cross company Balanced Scorecard (Kaplan and Norton 1996, 2001 and 2004) strategic process. The main goal of the initiative was to define strategic targets for corporate and business units and to put in place adequate measurements.

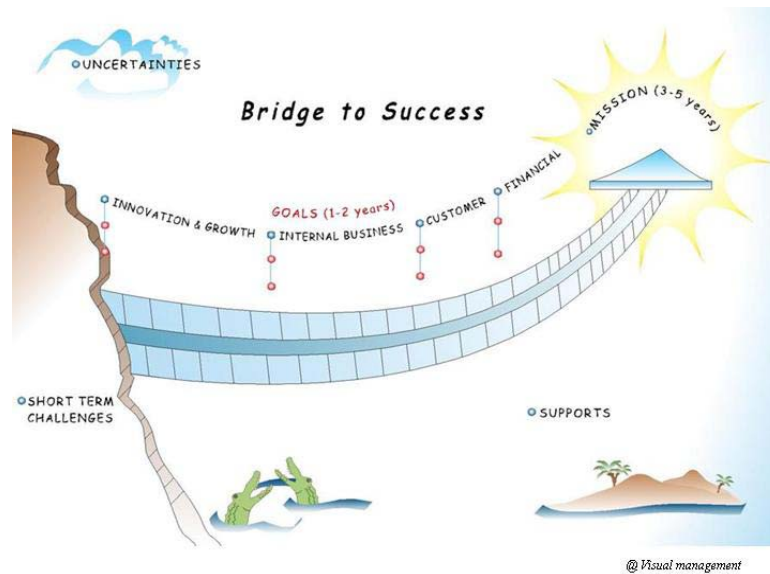
The Balanced Scorecard (Kaplan and Norton, 1996) is a performance management system (not only a measurement system) that enables organisations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes, in order to continuously improve strategic performance and results. The Balanced Scorecard suggests that one views the

---

organisation from four perspectives: Learning and Growth Perspective, Business Process Perspective, Customer Perspective and Financial Perspective.

The author conducted meetings and workshops in different units of the company - Corporate management, business unit A, business unit B, business unit C and business unit D. Enthusiasm and cooperation to the project varied between the different organisation units. Although managers were used to financial targets and measurements, generally unless a major reorganisation process was taking place, internal objectives transparency was limited and not discussed frequently with corporate management. Business unit B, for example, perceived the initiative as a shift to a tighter management control. Only after some persuasion, from corporate level, did they generate their derived strategic goals and targets. The business unit manager, without conducting a workshop and with no assistance from the author, led the process. Business unit A, on the other hand, was enthusiastic about the process. The business unit manager regarded the initiative as an opportunity to discuss the strategic objectives of year 2003 with his management in a structured way, prioritise goals, and communicate internally and externally the outcomes. In business unit C and business unit D the initiative was accepted mainly as “another corporate demand” and showed little enthusiasm when first approached. However, once they began the process managers immediately recognised its potential added value and led the process actively.

In the past the author had experienced various performance measurement projects, in various levels and with different scopes. One of the main lessons learned was that the goals derived from strategy were rarely fully implemented. Although perceived as important, many of the long-term goals when confronted with the short term constraints and challenges were not realised within the defined time frame. To overcome this problem, the author created a graphical facilitation tool (Figure 4-2) adding three other factors, to the four Balanced Scorecard perspectives. The first additional factor was support needed from external entities in order to achieve the goals. For example, some of the business unit's activities were highly dependent on the Regional Sales Units or corporate approval. A second added factor was mapping of major uncertainties. Some business units mapped specific market trends while others mentioned immature technology where the future outcome was not yet transparent. The third added factor was short-term challenges. The business units and corporate management mentioned short-term challenges which were financial oriented (i.e. improving cash flow, inventory reduction and profit targets) sales targets (i.e. penetrating a specific customer) and technology (i.e. finishing a specific product development).



**Figure 4-2: Strategic goals workshop template**

During the first meetings in each of the units, participation of all management members was active and enthusiastic. All managers clearly understood the model and the differences between short-term versus long-term goals. In all meetings the initial part of the workshop generated a large number of suggestions, followed by an open discussion on understanding the outcomes and narrowing down to ten goals. When encountering the prioritisation stage, some of the discussed themes reflected a deep gap in understanding, between the managers. For example marketing position and development roadmap were perceived and interpreted differently by various managers. Other interesting discussion occurred around investments in human assets in terms of motivation and specific skills. The manager of business unit A regarded the session as *“important to identify gaps in strategy perception and align all managers to sail in the same direction”*.

Each business unit’s long term challenges had different characteristics. The corporate units’ challenges were mainly concerned with internal workflow, new investments and alliances. Business unit A considered shifting its geographical focus from one part of the globe to the other as its main challenge. Business unit C’s long-term goals included penetration to new and existing customers with a new product. Business unit D was trying to justify investment in a new family of products as its current product was caught in the aging life cycle.

The session held at corporate level included a problem not confronted at the business unit level. One manager named the problem as the “two hats dilemma”. The corporate management was in charge of both the overall company performance and strategy while at the same time providing major services to the business units; such as operation (including production), IT, compliance laboratories and financial support. To overcome this problem, for this initiative the corporate management decided to focus only on the overall company performance.

The second workshop meeting included approving targets and measurements to the goals identified in the first workshop. In most cases the meeting was held after the

author had conducted preliminary work with some of the managers. Confronted with the need to take responsibility and define clear goal measurements the enthusiasm, experienced at the first workshop, deteriorated. While business unit managers tried to define aggressive targets, managers directly responsible for the goals tried to lower expectations. In some cases a discussion evolved on interlinks between targets and the importance of cross company co-operation.

Managers made use of the outcomes to communicate the unit goals internally and externally. The manager of business unit A, for example, conducted a series of presentations in all departments to all level of employees. The CEO of HiCo presented the process and its output to the company's Board of Directors. During 2002 the targets were updated once and several follow-ups were conducted. However market dynamics left some of the targets invalid due to the large deviation from actual results.

In 2003, the company CEO changed the model categories of the scorecard to financial, strategic (mainly market driven) and enabler (environmental such as motivation and infrastructure) and launched an incentive plan based on results. Managers were graded mainly for their direct responsibilities but also based on collective corporate and other unit success. Although there were periodical changes, due to internal and external turbulence, the incentive plan generated motivation to sustain the process by periodical updates. In 2004 the project saw the start of its third year.

The benefit of the strategic goals project was mainly to offer structured discussions between the CEO and managers and internally within the units. The discussions focussed on Long term versus short-term goals, constraints and priorities. The process helped align expectations between the different stakeholders and define clear targets. However without the project serving as a platform for incentive plans the author doubts whether the managers would have been committed enough to allocate time to maintain the project.

*Insights:*

⇒ *Strategic goals are beneficial mainly for structured discussion, decision making and communicating strategy.*

⇒ *Strategic goals initiatives tend to fade away unless linked to an incentive plan.*

### **Case 3: Seeking Synergy Between Units**

Synergy is defined as the ability of two or more units or companies to generate greater value from working together than they could from working apart (Goold and Campbell, 1998 and Campbell and Luchs, 1998). In 2003, as part of the HiCo strategy formation process, synergy was evaluated and identified for potential improvements. Based on Goold and Campbell (1998), synergy was analysed using six forms: Shared Know-How, Shared Tangible Resources, Vertical Integration, Pooled Negotiating Power, Combined Business Creation and Coordinated Strategies.

The cross company team included participants from corporate and business units. Corporate representatives wanted to seek synergy between units to offer joint solutions,

combined business creation and coordinated strategies. The business unit representatives showed willingness to cooperate to some degree in increasing shared know-how, shared tangible resources, and pooled negotiating power but resented the corporate goal to increase combined business creation and coordinated strategies claiming the effort was larger than the potential benefit. Corporate management intervention during the research period gained relatively little success in these synergy areas.

*Insights:*

⇒ *Businesses units will tend to dismiss synergy initiatives unless they are convinced of the direct short term benefits.*

#### **4.3.3 Emergent Strategy Formation Process**

##### **Case 4: Competing and Underground Development**

At the beginning of 2004, the author was asked to support a cost reduction initiative in one of the business units. When reviewing the customer support unit structure he was surprised to find that they were conducting a software development project, an activity that normally was the responsibility of the R&D unit. It was discovered that the project had been initiated by the following scenario. Field engineers working at the installation of products in the customer premises noticed a need for a specific solution that could potentially generate extra revenue for HiCo. When the unit manager approached R&D to develop this feature he was told that it was not in the current technology roadmap and due to resource constraints they would not be able to develop it. The unit manager persisted and approached his business unit's CEO. The business unit CEO was excited by the emerging idea and, although it was not in the main company scope, decided to grant the unit manager the highly unusual permission to develop and support the software feature. Development was based on outsourcing, directly competing with the R&D units' capabilities.

Another example of product emergence was when R&D engineers, eager to experiment and expand their knowledge into new technologies, sometimes conducted "underground" research and development based on formal budget, for other purposes. If they managed to develop a solution attractive to marketing potential they made their findings public. They knew that the sales and marketing managers, eager to increase sales would not challenge or investigate where or how these new and unplanned solutions had emerged. This phenomenon was also identified in company L6 (multiple case studies).

*Insights:*

⇒ *Emergence of innovation can originate not only in units formally defined as innovation oriented (Such as marketing and R&D).*

⇒ *Internal competition that might seem inefficient can be supported by management.*

---

⇒ *“Underground” innovation and business development is conducted by units and gains visibility only upon successes, received gladly by management.*

### **Case 5: Co-creating the Future with Customers**

In 2004, a marketing manager asked the author to assist him in a process that was launched the previous year and which he was encountering problems with. The initial idea started through self-organisation between him, as a marketing department employee and an energetic pre-sale engineer. The idea was to conduct a joint strategy process, with customers, analysing the end users needs and trends in order to generate new solutions and services. The Telecom Company would share its gathered market knowledge with HiCo as a supplier, while HiCo would contribute its complementary knowledge of technology trends and market know-how, gained from working with a large global customer base. There were no commitments attached to the deal. However, for HiCo it was a great opportunity for the emergence of new solutions and to substantially increase the chances of conducting business in the future with the specific customer. One of the managers described the benefit of the output in the following way:

*“Although we were quite aware of some of the customer needs before, the interaction led to viewing priorities differently, learning of new ones and co-creating a solution that the customer or us would have never thought of before, innovative, surprising and not in the mainstream.”*

The author was asked to assist in building a two day generic strategic workshop to serve this purpose. The concept was deployed successfully with two customers in two different countries and five other customers gave their consent for future workshops. However, although everyone in HiCo was highly excited and agreed on the benefits the project stumbled into budget constraints. Regional sales offices, for example, were measured based on short-term (mainly quarterly) sales and profits. Although the long-term benefit was clear to them, when they needed to contribute resources they did it partially and not consistently.

*Insights:*

- ⇒ *Self organisation at a low level can impact the course of strategy.*
- ⇒ *Interaction with the customer can lead to emergent new services and products.*
- ⇒ *Although all might agree on the “right thing to do”, resource allocation is not necessarily aligned.*
- ⇒ *Constant stress between long term needs, such as new product development and new customer penetration, and short term revenue and profit targets impacts decisions.*

**Case 6: The Clown who Became King**

One of the insights of the author, as a strategy process facilitator, was with Mr X. Normally, while conducting a cross company activity; managers who have a new idea or non-mainstream vision see the process as a stage and an opportunity to promote their concepts. Mr X, whose name has been omitted for confidentiality reasons, was an experienced and open-minded engineer who served in several positions in the company and joined the business development unit (business unit level). Mr X's presentations were used to gain the audiences' sympathy and laughter due to its non-conformist stand, consistency in pursuing a goal and his unique humoristic style. Mr X's vision was to take the company's competencies and products in an existing market through minor adjustments, to penetrate a new market. For a long period, Mr. X's vision was constantly turned down by management, claiming it to be too risky and preferring to allocate R&D resources to increase the revenue in the existing market. However, after constant persuasion, limited resources were finally allocated. Within three years the new market accounted for over 40% of HiCo's business unit sales.

*Insights:*

- ⇒ *One man's personal vision and internal marketing skills could have a substantial impact on strategy.*
- ⇒ *Many great ideas are not materialised due to lack of internal marketing skills of the originator.*
- ⇒ *Managers find it hard to evaluate and decide on resource allocation for opportunities. Often they rely on intuition or personality.*

**Case 7: Unexpected Strategy Formation Process Outcomes**

In late 2002, the author was called to assist in preparing and conducting an "Out of the Box" one-day workshop for one of HiCo's business units. The workshop aimed to identify new business opportunities to substantially increase sales. A diversified team was chosen, composed of business unit managers, regional sales unit managers and external experts. An out of office, scenic environment was chosen for the workshop and a process was defined based on a well-established opportunity idea generator model. A unique musical and special effects e-mail invitation was sent to all participants, aimed at enthusing them and encouraging them to come to the event with an open mind. The business unit CEO insisted, and stood by his commitment, to allow a totally emergent process without trying to impose a certain direction. The process outcomes were quite unexpected. The main conclusion was that the main opportunity was not to launch a new product or penetrate new market but rather to improve the customer focus within the business unit. It was believed that a restructuring of the organisation for improved sales processes, addressing existing customers' unique needs and raising customer satisfaction, would result in increased revenue within the existing customer base and market.

*Insights:*

⇒ *When management takes an enabler role, supporting an emergent process, surprising outcomes may arise. Management should be willing to take the risk as well as the opportunity for unexpected outcomes.*

### **Case 8: Empowering Employees**

The following example represents a process integrating the concepts of complexity (the author was partially involved in the planning but did not participate in the workshop - however he was granted access to all the data and conducted interviews before and after with the process owner and participants). The goal of the initiative (2004) was to generate a bottom up emergent strategy in order to improve the working environment and future success of one of the business units. The process owner was the Human Resource (HR) manager, supported by a consultant. The project's first phase included a one month intensive internal communication effort (posters, meetings with all departments, and the forming of a cross-company committee). Employees from all company functions were called to volunteer and take part in shaping the company by participating in a two day workshop event outside the company premises.

Although quite cynical about the potential outcome, around a quarter of the business unit employees signed up representing all business units, management levels and departments and amounting to almost 200 participants. The workshop was conducted as an open space of ideas. The business unit's CEO opened the first day with a personal commitment to respect and seriously consider any emerging initiative. Later participants were asked to raise any issues on any subject and conduct a Hyde Park (where each participant can raise any issue and discuss it, and the audience can freely choose which discussion to join) type sessions in various rooms. Over 50 issues were raised and discussed on a wide range of subjects such as: company vision, promoting a certain product, mutual respect, work from home, retention plan and the toilet conditions. A concluding first day session was conducted with all participants summarising the outcomes and giving all an opportunity to comment. On the second day, after clustering the issues overnight, parallel panels were conducted. Action committees were launched and volunteering employees were appointed to lead the processes.

In the feedback collected the following day, from managers and employees that had attended, all described an amazing process where trust and intimacy was reached between all participants at all company levels. All shared a common desire to improve the company's working environment and reach business success. However the described process to reach this shared goal, between participants was described differently by managers and employees.

A high rank manager described the conclusion in the following way:

*"We found out that 90% of the problems can be solved and the solution lies in our hands. Employees should take responsibility and lead the change..."*

A project manager described his perspective of the next steps a bit differently:



*“The formed cross company teams should progress in pushing the initiatives; however I am not sure if management will fully support the changes in terms of cooperation and resources”.*

While a production floor employee had quite a different perspective:

*“The workshop was good. It was clear what bothered us as employees and how to improve motivation. However I doubt if management will do any thing about it at all.”*

*Insights:*

- ⇒ *A good facilitated, out of the company, diversified and cross company process could have good outputs in terms of idea generation, shared goals and improved motivation. However there is ‘The Day After’ effect, back in the company every day life, where implementing the perceived conclusion could be difficult.*
- ⇒ *The same conclusion could have a substantially different interpretation based on the stakeholder.*
- ⇒ *There are cases where employee empowerment is granted and even expected but hardly realised by employees.*

## 4.4 Refining Mintzberg’s Model

### 4.4.1 Introduction

The previous section populated and validated Mintzberg (1987) model of intended and emergent strategy formation process by giving examples from the HiCo case. However several important aspects of strategy formation process are neglected in the simplified model and worth discussing. This section refines Mintzberg (1987) by adding three additional aspects (Figure 4-3). These are constraints, business environment and blending intended and emergent strategy formation.

Christensen and Raynor (2003) claim there are three conditions for deliberate strategies: strategy must encompass and address correctly all of the important details required to succeed, strategy should be communicated to all employees, collective intentions must be realised with little unanticipated influence from outside political, technological, or market forces. Cases nine, ten and eleven (outlined below) generated from HiCo’s action research, offer examples of constraints causing the intended strategy not to be realised.

The business environment can affect the strategy formation process. Courtney *et. al.* (1997) for example, perceives uncertainty, in an economic environment, as the manifest of the unfeasibility of defining possible outcomes due to a given situation in the present. Courtney *et. al.* (1997) illustrate how different levels of uncertainty derive different analytic tools and potential approaches for strategic decision making. Cases twelve and thirteen (outlined below) generated from HiCo’s action research give examples illustrating HiCo’s business environment characteristics.

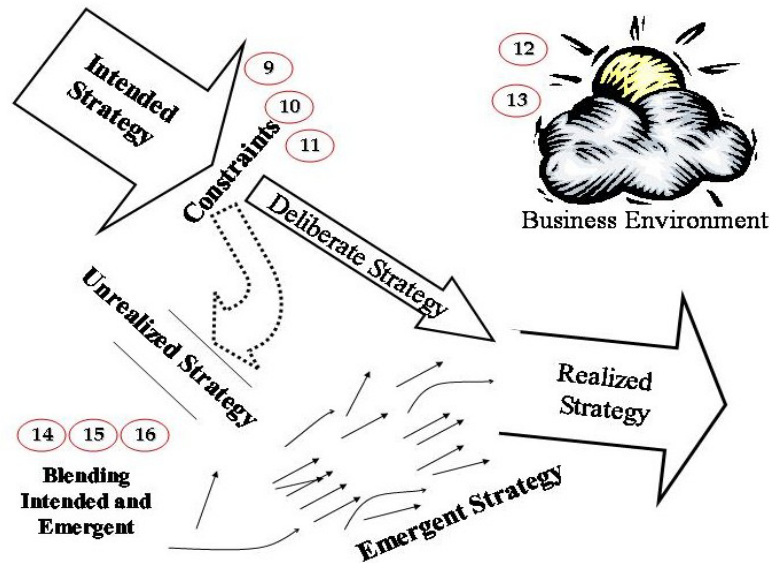


Figure 4-3: Refined Mintzberg (1987) model of intended and emergent strategy formation process and distribution of cases

Cases fourteen, fifteen and sixteen, generated from HiCo's action research, describe and give insights from a strategy formation process in 2003 where intended and emergent oriented activities were deliberately blended.

This section includes eight following cases, distributed in three subsections.

### Constraints in Realizing Intended Strategy

Case 9 - The Gate Keeper

Case 10 - Stakeholders influence on strategy realisation

Case 11 - Pace of change

### Business Environment:

Case 12 - Market characteristics

Case 13- Unpredictable global events

### Blend of Intended and Emergent Strategy Formation Process:

Case 14 - Planning vs. emergent process – first lesson

Case 15 - Implementing preconditions for strategy emergence

Case 16 - Self Diagnoses

#### **4.4.2 Constraints in Realizing Strategy**

##### **Case 9: The Gate Keeper**

The strategy formation process, in many cases, involves various levels of hierarchy. However recommendations for example of: geographical shift, new product development, or investments in infrastructure all depend on resource allocation. The author encountered several cases where financial officers managed to postpone a decision, downsize it substantially or even ignore it.

The financial department at the corporate level and at business unit levels in HiCo are not always involved in strategic processes due to the lack of resources and a high overload in reporting tasks. The strategy is unfolded as a pattern of the past looking mainly at financial results. This sometimes causes a lack of understanding of the dynamic overall picture and future directions. The financial department is usually constrained to a well defined and approved short term budget by a higher authority (i.e. Board of Directors). Trying to reduce unexpected changes and avoiding high-risk initiatives complicates budget changes and shifts, unless an initiative demanding budget is accompanied by a well defined source of finance (i.e. shutting down another activity). Yearly and quarterly periodical reporting also reduces resource allocation flexibility due to the natural tendency of the financial managers to try and fall within the predictions.

*Insights:*

⇒ *Resource allocation processes and stakeholders tend to substantially influence strategy realisation.*

##### **Case 10: Stakeholders Influence on Strategy Realisation**

Various stakeholders influence the strategy formation process in the decision and realisation phases, reflected frequently as an emergent outcome. For example, yearly and quarterly revenues budgeting is a process that has to reflect the company's long-term strategy (i.e. products and customer penetration, pricing policy) integrated with the market forces (i.e. actual demand, competition in terms of prices and products) and short-term constraints (i.e. resources, personal availability). However, various stakeholders tend to influence the process and its outcomes and represent, in many cases, opposing forces. Sales executives, based on meeting quarterly or yearly targets, might prefer to downsize expectations, while regional business unit managers might increase estimations in order to have a larger budget allocated. Financial officers tend sometimes to engage in a conservative position related to revenues, to avoid or reduce the pressure of approving spending requests. Operation managers evaluated by on time delivery will tend to increase forecasts to allow purchasing of raw material, such as components, ahead of time and in adequate size, whilst financial executives, with high cash flow awareness, will tend to downsize predictions to avoid large inventories. Corporate management is very committed to the revenue estimation given to the board and announced to the stock market and are therefore focused on eliminating deviation as much as possible.

Other examples of stakeholder influence encountered by the author include: members of the Board of Directors keen on pursuing specific initiatives, managers that align a business activity to job promotion, personal rivalries, professional interest, and unit managers interfering in favour of their units' interests.

In many cases the encountered influence was not easily visible or the author learned of it in a later phase.

*Insights:*

⇒ *Stakeholders influence strategy implementation and can serve as a constraint.*

⇒ *Stakeholders' effect and influence is not always visible and could be interpreted, by the objective observer, as irrational behaviour by the organisation but is in fact due to individualistic behaviour.*

### **Case 11: Pace of Change**

The duration of the strategy formation initiatives tended to vary from several weeks to several months. In the course of the research the author witnessed, more than once, how basic assumptions rapidly changed within the time frame of the described process resulting in partial or no realisation of the outcomes.

Since the strategy formation process was usually time consuming, managers were not eager to launch or participate in such processes, unless a specific threat or an opportunity was at stake demanding a review of the overall picture. However, due to the pace of change caused by external and internal turbulence, by the time a decision was granted to launch a process for the output implementation phase, the initial cause for the process had often changed or more urgent threats or opportunities had arisen.

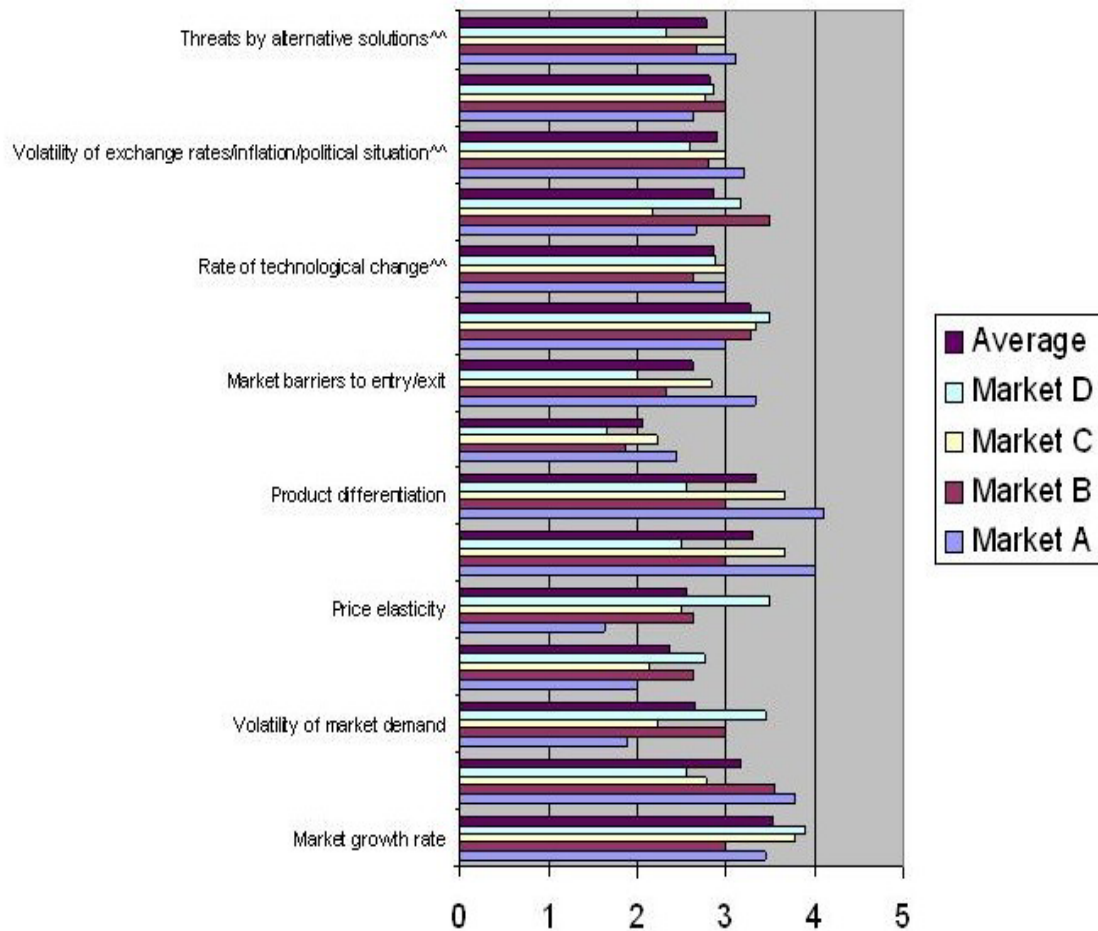
*Insights:*

⇒ *The pace of change within the company's external environment frequently outdates intended strategy plans causing them not to be realised.*

### **4.4.3 Business Environment**

#### **Case 12: Market Characteristics**

At the beginning of 2001 the author, as a consultant, facilitated an intended strategy process in one of HiCo's business units, aimed at re-shaping the four segments market portfolio. A questionnaire based on over 40 parameters, split into three categories (Market Attractiveness, Relative Market Position and Technology) was distributed to 15 top and middle managers from Management, Marketing, Sales and R&D departments. The collection and analysis of input was carried out over two weeks and culminated in a two days off site workshop.



**Figure 4-4: Examples of markets (A-D) comparison**

Managers were asked to evaluate the parameters on a 1-5 (Low-High) scale. As can be seen in Figure 4-4, the following examples of parameters representing market dynamics scored an average high: volatility of exchange rates/inflation/political situation, access to critical/special components, volatility of market demand, market profitability, market growth rate and rate of technological change. The following examples represent high complexity in some markets: regulatory climate, market barriers to entry/exit and product differentiation.

Analysis of the questionnaires revealed some of the parameters were evaluated by all participants with high consensus (little variance), while others showed a large degree of disagreement between the same business unit managers. Examples of high and low consensus are presented in the following table:

**Table 4-1: Example of consensus spread between questionnaire parameters in a HiCo Business Unit (2001)**

High consensus	Low consensus
<ul style="list-style-type: none"> <li>• Volatility of market demand</li> <li>• Customer bargaining power</li> <li>• Price elasticity</li> <li>• Customer brand loyalty</li> <li>• Market barriers to entry/exit</li> <li>• Access to critical/special components</li> <li>• Volatility of exchange rates/inflation/political situation</li> <li>• Relative market share</li> <li>• Company's image as perceived by customers</li> <li>• Company's prices relative to competitors</li> <li>• Relative cost position</li> <li>• Probability of technical success</li> <li>• Distribution network coverage</li> <li>• Technological competitive strength</li> </ul>	<ul style="list-style-type: none"> <li>• Market growth rate</li> <li>• Market profitability</li> <li>• Regulatory climate</li> <li>• Rate of technological change</li> <li>• Technology/Innovation importance as perceived by customers</li> <li>• Level of competition after analysing the characteristics of competition</li> <li>• Threats by alternative solutions</li> <li>• Market share growth</li> <li>• Customer loyalty to our company</li> <li>• Marketing skills and strength</li> <li>• Probability of marketing plan success</li> </ul>

The volatility of market demand affected revenue predictions in some periods in a substantial manner. In 2003, HiCo's deviation from planned budget at the beginning of the year to actual budget at the end of the year was roughly 10% below the estimation. Further analysis shows that low deviation is due to the opposite and narrowing effect of two business units. In one business unit the deviation was roughly 17% percent above the estimation while in another business unit it accounted for roughly 29% below the estimation.

Figure 4-5 presents some of the market dynamics through a chart showing one of HiCo's competitor's revenues in a period of seven quarterly results.

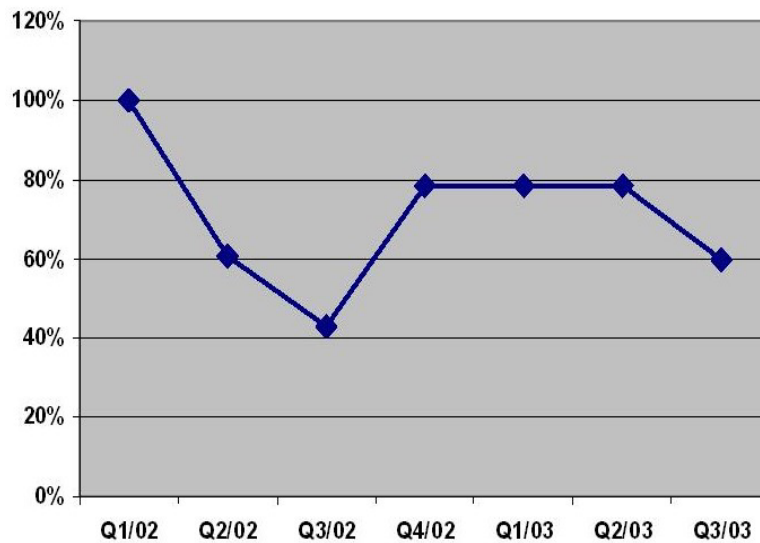


Figure 4-5: HiCo competitor revenues relative to Q1/2002

*Insights:*

⇒ *Perceived market and company characteristics can vary between managers.*

⇒ *Prediction ability is limited due to volatility of market demand.*

### Case 13: Unpredictable Global Events

In the course of the action research, the author participated in building and maintaining various financial business models at corporate and business levels. The forecasted assumption always incorporated a level of uncertainty, due to the nature of market dynamics. However aside from the residual uncertainty several global events had major effect on the telecom market and HiCo in particular. Three examples in 2003 were the War in Iraq, the SARS disease and the strengthening Euro.

The author experienced the effect the SARS disease was having on the strategy process in 2003, for example while assisting in building a business plan for HiCo's activities in China. The company was not new to the Chinese market however it re-assessed its activities due to the growing market on the one hand and decreasing profits caused by local competition on the other.

When the SARS disease broke out in China in the first half of 2003, sales stopped completely and the level of uncertainty increased dramatically. All HiCo employees were ordered to immediately stop flying to the Far East and China specifically. HiCo's Chinese employees had difficult times travelling within the country and the buying activities of customers reduced substantially. After a few weeks, when one of the sales team volunteered to visit an unaffected region in China, he was later asked to stay two weeks at home to ensure no contamination. Other functions of the company were affected as well, for example the R&D department had to shift its resource allocation spread due to changing marketing priorities and the legal department had difficulties in collecting payments from Chinese customers. After several months, sales started to

increase. The accumulative effect caused over 40% of revenue reduction in China versus the original 2003 budget, which resulted in substantial losses.

*Insights:*

⇒ *Unpredictable global events can have major impacts*

#### **4.4.4 Blending Intended Strategy and Emergent**

Following re-organisation in 2003, the Board of Directors and CEO of HiCo decided to launch a strategy formation process. A cross company team of managers was formed called 'Strategy Forum' and were requested to report progress on a quarterly basis to HiCo's Board of Directors. The author was asked to support the process as an internal consultant. Experienced by past strategy formation processes and inspired by new concepts of emergent strategy the author decided to try and integrate the intended strategy formation process with new aspects.

The 2003 corporate strategy formation process consisted of sixteen full forum-meetings, three quarterly board presentations, eight supporting workshops and various related sub groups and personal meetings. The duration of the initiative was nine months. Figure 4-6 describes the process roadmap. The process consisted of three main phases: analysis, strategy building and implementation. The strategy forum designed the strategy process as a vertical funnel. The idea was to open up the process to a vast amount of ideas and opportunities at early stages and later focussing in on a practical implementation plan. Only the first two phases of the process out of the three were realised.

As can be seen, represented by the dotted line in Figure 4-6, the process was designed to include several bottom-up and several top-down interactions within several milestones stages along the process to foster discussion between the various stakeholders.

Phase I, called Analysis, was designed to include the following parts: Business Environment and Trends, Strengths Weaknesses Opportunities and Threats analysis (SWOT), Time Frame, Opportunities Bank, Synergy/Parenting Role and Type of Customers. This phase was fully realised. A summary of findings was presented to HiCo's Board of Directors for discussion.



## Strategy Formation Process - Detailed

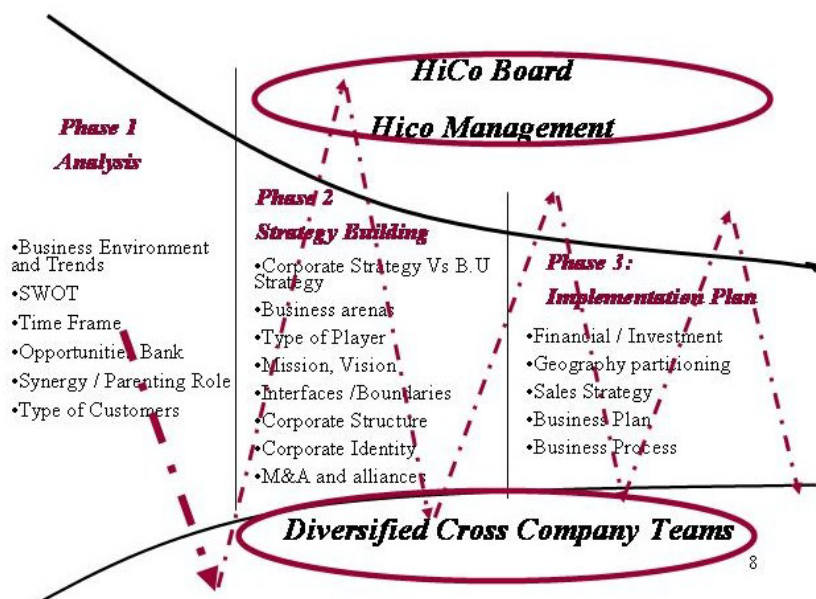


Figure 4-6: HiCo strategy formation process

Phase II was called Strategy Building and included the following parts: Corporate Strategy versus Business Units Strategy, Business Arenas, Type of Player, Mission, and Vision, Interfaces /Boundaries, Corporate Structure, Corporate Identity, Merger and Acquisitions and Alliances. This phase was also fully realised. The outputs included initial recommendations presented to the board for discussion.

Phase III, called Implementation Plan, was designed to include the following parts: Financial /Investments, Geography Partitioning, Sales Strategy, Business Plan and Business Process. Phase III was barely realised through the project.

The strategy formation process started with high enthusiasm and involved a large number of middle managers' contribution through workshops and meetings across the company business units and regional sales units. Special emphasis was put on business opportunities, brainstorming and creating an opportunity bank. However as the process progressed and decisions had to be made, enthusiasm was slowly replaced by internal politics and the conflicting interests of stakeholders. Major internal changes were taking place at the time as well. The process stopped after delivering initial recommendations to the board of directors.

Although not proceeding to the final phase of building a formal implementation plan many of the process outcomes were implemented by management in various ways. The process was perceived as contributing to building a common language, stressing the importance of a flat organisation structure, improving the understanding of the business geographical and technological trends, facing reality in what could and could not be done in terms of synergy, and generating guidelines for business development for alliances, merger and acquisitions. Some of the more complicated issues took management another half a year to confront having to make some personal and organisational changes before implementation.

The following three cases will present insights from the described processes:

#### **Case 14: Planning versus Emergent Process – First Lesson**

The first task was to suggest a process plan, integrating lesson learned from previous processes and from acquired knowledge through the literature, the author designed a perceived best-fit process. New concepts such as diversification, emergence, edge of chaos, turbulence and unpredictability were introduced.

The new concepts were presented as a shift from assumptions of organisation as a machine where you cannot tolerate change to a business organisation that is seen as a living organism, or a complex-adaptive system, which is in continuous interaction with its environment.

The author's well detailed plan was presented in the second meeting of Strategy Forum and was not accepted well. The senior managers who were well experienced in management in general and in previous strategy formation process in particular, had their own perception of a desired process.

HiCo's Chief of Technology (CTO) at that time was a very open minded and experienced senior manager. Some of the main HiCo technological and business successes along the years were related to his actions and guidance. In a private meeting with the author, after a long discussion about emergent and intended strategy and presenting supporting examples from the company history, he presented the following critique to the author:

*"I basically agree with your new strategy formation process themes. However it seems you have not incorporated them yourself. Instead of allowing a process to emerge from the diversified well competent team, allowing changes along the way, you tried to fully impose a process in an intended way..."*

*Insights:*

*⇒ New strategy formation themes should be incorporated initially by the facilitator and only later by the organisation.*

#### **Case 15: Implementing Preconditions for Strategy Emergence**

Various scholars present preconditions for strategy emergence (Brown and Eisenhardt, 1998; Wood, 1999 and Hamel, 2001). Hamel (2001) states that like all forms of complexity, strategy is poised on the border between perfect order and total chaos, between absolute efficiency and blind experimentation, between autocracy and complete ad-hocracy. Hamel (2001) suggests five preconditions for the emergence of strategy. The preconditions are reviewed as literature benchmarks to some of the themes incorporated in HiCo's 2003 strategy formation process.

**Precondition one:** New voices

---

*“Bringing new ‘genetic material’ into the strategy process always serves to illuminate unconventional strategies. Top management must give up its monopoly on strategy creation, and previously underrepresented constituencies must be given a larger share of voice in the strategy creation process. Specifically, I believe that young people, newcomers, and those at the geographic periphery should get a larger share of voice”* (Hamel, 2001, p.193).

The Strategy Forum appointed as steering and operational committee of the process not only a senior corporate manager but also senior managers from the business units and regional sales units. The process included more than a hundred other HiCo contributors participating in various workshops, conducted within the business units. Each workshop was based on a diversified team (i.e. sales, marketing, business development, R&D) of middle managers. A special shadow forum was formed consisting of sixteen young managers from all of the different business units in order to work in parallel on some of the issues in an unbiased way. At a certain stage the shadow forum representatives presented their outcomes to the Strategy Forum and later joined some of their discussions. External technology experts were invited to join several of the Forums’ sessions.

However, several obstacles had to be overcome in bringing the New Voices preconditions into being. Some of the participants showed a level of suspicion as to managements’ true intentions and the probability of leveraging truly innovative ideas. Others regarded the activity as a unique personal opportunity to affect the company in new channels. Another obstacle noticed was the need for a common language. Various technological terms and market segments names were interpreted differently in the different business units. Several preliminary sessions had to be held to create a common language.

**Precondition Two:** New conversations

*“Creating a dialogue about strategy that cuts across all the usual organizational and industry boundaries substantially increases the odds that new strategy insights will emerge. All too often, in large organizations, conversations become hardwired over time, with the same people talking to the same people about the same issues year after year, after a while, individuals have little left to learn from each other.”*(Hamel, 2001, p.193).

The strategy formation process incorporated new methods and tools for various issues such as: opportunities scanning, synergy analysis and mapping technology. Mixing new voices, as mentioned, was one of the planned drivers to create new conversations. However the author noticed that in many cases a pattern of returning to old conversations with stakeholders taking the same old positions emerged. This could be attributed either to old habits, or managers feeling more comfortable and reducing risks (as well as opportunities) by discussing familiar business areas.

**Precondition Three:** New passions

*“Unleashing the deep sense, of discovery that resides in almost every human being, and focusing that sense of discovery on the search for new wealth-creating strategies, is another prerequisite ... individuals will eagerly embrace change when given the chance to have a share of voice in inventing the future of their company. They will invest when there's a chance to create a unique and exciting future in which they can share...”* (Hamel, 2001, p.193).

Young managers in the strategy formation process were offered the chance to help shape the company's future and were given an opportunity to be heard and a chance to participate and affect the strategy. As mentioned, some readily embraced this opportunity while others were more pessimistic about the process.

**Precondition Four:** New perspectives

*“New conceptual lenses that allow individuals to preconceive their industry, their company's capabilities, customer needs, and so on substantially aid the process of strategy innovation. To increase the probability of strategy innovation, managers must become the merchants of new perspective. They must search constantly for new lenses that help companies preconceive themselves, their customers, then competitors, and thereby their opportunities”.* (Hamel, 2001, p.193).

External experts experienced and specialising in different technologies and markets were brought to the process as a search for new lenses. Several exercises were held trying to map the future industry and technology map from various new perspectives.

**Precondition Five:** New experiments

*“Launching a series of small, risk-avoiding experiments in the market serves to maximize a company's rate of learning about just, which new strategies will work and which won't. The insights that come from a broad-based strategy dialogue will never be perfect. While much traditional analysis can be done to refine those insights into viable strategies, there is much that can be learned only in the marketplace.”* (Hamel, 2001, p.193).

The Strategy Forum recommended (however not brought to board approval) a new business process incorporating a new resource allocation methodology supporting new business ideas. The process was shaped to increase trial and error by allocating, without the need of providing a full business plan, limited amount of resources to new initiatives. The process was meant to enhance risk taking and to evaluate, in an ongoing manner, running projects and the closing down of unpromising ones.

Although the five mentioned preconditions and other themes were incorporated and various novel ideas emerged, the general impression was that conducting a one-time 'lab oriented' initiative was not enough. One executive stated that many ideas emerge in unexpected interaction in the corridor, coffee corner, gym, and customer site. Due to the lack of ongoing scanning and a process to leverage opportunities many ideas stay

unrealised. Even more worryingly, the corporate unit in many examples lacked the energy to leverage even ideas that were generated through a structured process.

*Insights:*

- ⇒ *Implementing new perspectives for emergent strategy has to be accompanied by a true commitment by management and real belief by employees that the outcomes will be leveraged.*
- ⇒ *Creating a common language is essential for cross company interactions.*
- ⇒ *The environment for emergence has to be created in an ongoing manner and not just in specific initiatives.*

### **Case 16: Self Diagnoses**

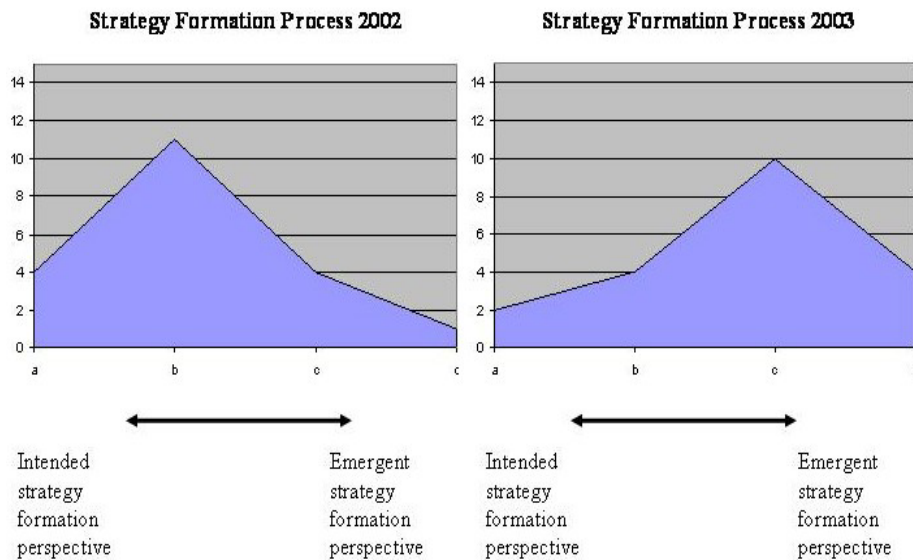
Olson and Eoyang (2001) offer a self-diagnosis questionnaire called an Organizational Change Framework, which evaluates how closely current system change practices match a complex adaptive perspective. Since they regard strategic planning as one of the change methods the author, of this study, used the tool to compare his approach as participatory facilitator in two strategy formation processes at different periods.

The first process was conducted in 2002 in business unit A. The process duration was approximately half a year and it was designed in a linear way. Stage one consisted of 14 geographical strategy analysis groups, 3 segment analysis groups, and 5 overview analysis groups (i.e. post sale, profitability) working in parallel with pre given templates. The second stage included integration of information (Geography/Segment), business model and resource allocation model. The author acted as the facilitator of the project.

The second process was the HiCo 2003 strategy formation process, described at the beginning of this section, where new themes were incorporated and tested. The self diagnosis (Appendix B) questionnaire contained twenty questions with four optional answers (a-d). Olson and Eoyang (2001) claim there is no best profile. The approach of a change agent must fit the expectations and needs of the client systems. If scores in the a and/or b columns are higher than scores in the c and d columns, the approach to work contains the inherent belief that organisation change is best accomplished by, clear, predictable means, using influences and position power to make change happen. This may be very appropriate if control is needed to capitalise on what is working well in a particular situation. Olson and Eoyang (2001) relate traditional approaches to beliefs in top down control; efficiency in control and correct predictions. Therefore, in strategy formation processes this can be related to the intended strategy formation process.

Columns c and d represent a complex adaptive perspective to organisational change. This perspective is important for an organisational unit when it needs to be flexible and creative. Olson and Eoyang (2001) view the complex adaptive perspective as understanding that organisational change emerges from the evolution of individuals and small groups. In the strategy formation process, this can be related to incorporating a proactive emergent strategy.

As Figure 4-7 presents the strategy formation process in 2002 based on Olson and Eoyang's (2001) questionnaire was a more intended process than in 2003. Aggregated results of categories a - b and c - d were fifteen and five respectively in 2002, versus six and fourteen in 2003. Therefore based on Olson and Eoyang's (2001) interpretation of the self-diagnoses, the strategy formation in 2003 represents a more complex adaptive perspective about organisation change or a more emergent approach to strategy formation.



**Figure 4-7: Author as participant facilitator self diagnoses based on Olsen and Eoyang (2001)**

An interesting observation is that although there is a change in emphasis between the two strategy formation processes, both incorporate a blend of characteristics attributed to the intended strategy formation facilitation perspective as well as what is regarded by Olson and Eoyang (2001) as complex adaptive system change.

*Insights:*

⇒ *Different strategy formation processes include different blends of intended and emergent perspectives.*

## 4.5 Research Limitations and Strengths

The HiCo action research case faced several research limitations. The first limitation was concerned with conducting the research in one company with specific external and internal contexts limiting, to some degree, the ability for generalisation. Although the research was conducted over nineteen months and incorporated to some degrees previous experiences it represented only a specific time frame of the organisations evolution.

The analysis of the case study was embedded due to the multiple units of analysis (corporate level and several business units) allowing triangulation of findings

concerning several processes. In some of the processes (i.e. balanced scorecard) multiple methods were used in a complementary fashion.

The author's three years of experience, previous to the research, in HiCo allowed him to look at some patterns created in HiCo's evolution and incorporate a deeper understanding of some events. However his previous involvement with stakeholders and responsibility to the results of past processes could have also caused some bias. Furthermore HiCo served as a source of income to the author raising the possibility that the author, in order to reduce risk of process failure, reduced to some degree the incorporation of radical new methods.

Table 4-2 presents an analysis between several general important action research characteristics provide by Eden and Huxham (1996) to HiCo's actual action research.

## 4.6 Summary

In this Chapter, through sixteen cases generated from a nineteen-month action research study in HiCo, Mintzberg's (1987) model describing strategy formation as intended and emergent was populated and validated in a real world environment. Long term planning, defining strategy objectives and trying to create synergy between units were provided as examples of intended strategy. Two types of emergent strategy formation cases were discussed. The first type consists of cases where strategy emerged bottom up without any management guidance, demonstrated in several cases like that of the underground development example and personal initiatives conducted by several middle managers. The second type of emergent strategy examples described how management proactively tried to create an emergent process and its consequences (i.e. open space workshop in SBU A).

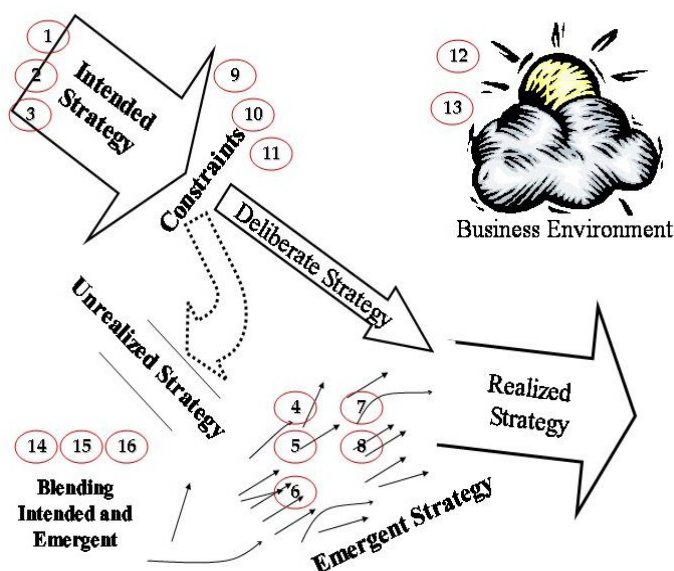


Figure 4-8: Refined Mintzberg (1987) model of intended and emergent strategy formation process and distribution of cases

**Table 4-2: General and specific characteristics of Action Research**

General Action research Characteristic	HiCo Action research Characteristic
<ul style="list-style-type: none"> <li>Action research demands an integral involvement by the researcher</li> </ul>	<ul style="list-style-type: none"> <li>The author was a participative observer in the company. The author was granted a mandate as facilitator of the strategy formation process to integrate with management and process owner's new themes as well as to test traditional ones. Highly linked to the company success, the author endured the consequences of the process outputs.</li> </ul>
<ul style="list-style-type: none"> <li>As well as being useable in everyday life, action research demands valuing theory</li> </ul>	<ul style="list-style-type: none"> <li>The action research was conducted in parallel to literature exploration, multiple case studies and survey in other companies. Initial outcomes were presented and reviewed on several occasions (i.e. conference papers and presentations, university progress review, supervisor meetings). These allowed new perspectives to be incorporated beyond every day life and valuing theory.</li> </ul>
<ul style="list-style-type: none"> <li>Theory building, as a result of action research, will be incremental, moving through a cycle of developing theory to action to reflection to developing theory, from the particular to the general in small steps</li> </ul>	<ul style="list-style-type: none"> <li>The nineteen-month duration, multi-methods and multi units' scope of the action research as well as the additional research conducted in parallel to the action research allowed theory building and incremental steps to some extent.</li> <li>However, the actual emerging needs of HiCo in terms of strategy formation process and their timing on one hand confronted the author with unexpected insights but on the other eliminated some times the opportunity to incorporate a cycle of theory to action to reflection to developing theory.</li> </ul>
<ul style="list-style-type: none"> <li>For action research, the processes of exploration of the data – rather than the collection of the data – in the detecting of emerging theories and development of existing theories must either be replicable or, at least, capable of being explained to others</li> </ul>	<ul style="list-style-type: none"> <li>The author had high access to data information of documentation, templates and outcomes. Furthermore a dairy and notes have been collected. However, client confidentiality will allow limited data publication in terms of business content.</li> </ul>
<ul style="list-style-type: none"> <li>Action research requires that the theory development which is of general value is disseminated in such a way as to be of interest to an audience wider than that involved with the action and/or with the research</li> </ul>	<ul style="list-style-type: none"> <li>The author tried to disseminate the outcomes in multiple ways such as graphical representation and story telling techniques to interest the audience</li> </ul>

Mintzberg's (1987) simplistic model describing strategy formation as intended and emergent was later refined (Figure 4-8) to include three additional aspects affecting the strategy formation process. The first demonstrated **constraints** such as resource allocations and stakeholders' interests in realising intended strategy formation outcomes. The second aspect presented the **business environment** as incorporating unpredictability and as sometimes perceived differently by managers. The third aspect reflected HiCo and the author's personal experience in attempting to incorporate a



**blend of intended** strategy formation process with preconditions for strategy emergence.

Several interesting questions arise from the action research, which were investigated further in other parts of the author's research:

- What is the management role in relation to the intended and emergent strategy formation process?
- What is the relation between the environment and the blend of intended and emergent strategy formation process?
- Would differences be found in different companies (of different size and/or operating in different business environments)?
- Would companies blend of intended and emergent strategy formation change with time or business environment?

To overcome the limitations of the action research being conducted in only one company, the questions were to be investigated in the context of sixteen other companies, through multiple case studies and a survey (see Chapters 6 and 7). However, first, a theoretical framework incorporating the relationships between management role and strategy formation was developed, as described in Chapter 5.



## 5 Strategy Formation Matrix

*This Chapter aims to introduce and theoretically investigate the Strategy Formation Matrix developed by the author. The Chapter will then go on to outline the different School of Thoughts within the strategy literature relevant to this research and map the various schools onto the matrix. The Chapter will conclude with a review of Complexity approaches to management and a summary.*

### 5.1 Introduction

In the literature review (Chapter 2), various approaches were introduced to strategy formation of companies confronting uncertainties and turbulence. While some approaches confront uncertainty with analytical tools such as real options, scenarios planning etc., new approaches link chaos and complexity studies to strategic management based on concepts such as self-organisation, emergence, complex adaptive systems and edge of chaos. Some of the main implications these new approaches claim are:

- Strategy formation is predominantly an emergent and not an intended process.
- The role of management is different as suggested by orthodox management theories.

In the previous chapter, based on HiCo's action research study, real world cases were described representing the blend of emergent and intended strategy formation process. From the cases described, it was evident that the role of management was not limited to intended strategy formation but also included setting processes and preconditions for emergent strategy as well. This chapter will offer a theoretical investigation of the relationship between the role of management and the strategy formation process in existing theories. To do this, the author designed a Strategy Formation Matrix, which has two dimensions; type of strategy formation process (reactive versus proactive) and management role (intended versus emergent). This matrix was then used to project and categorise different strategic schools from within the literature. In subsequent chapters

this matrix will be evaluated in real world companies and later will set the ground, as part of an extended model, to investigate the relationships between the business environment and the strategy formation process.

## 5.2 Design of the Strategy Formation Matrix

Mintzberg (1987) perceives the definition of strategy as a plan, as a consciously intended course of action. Intended strategy tends to be either unrealised or turns into a deliberate strategy when strategic plans that existed previously are realised. Emergent strategies are patterns developed in the absence of plans and intentions, or despite them (those that go unrealised). Christensen and Raynor (2003) claim emergent strategy bubbles up from within the organisation in the cumulative effect of day-to-day prioritisation and investment decisions made by middle managers, engineers, salespeople, and financial staff. These tend to be tactical, day-to-day operating decisions that are made by people who are not of a visionary, futuristic, or strategic state of mind.

Management role in an intended strategy formation process is relatively clearly defined. The management role of senior management is often described as looking at and analysing the organisations bigger picture and setting strategy. The CEO is sometimes considered the strategist responsible for the control and consciousness of the organisation (Mintzberg *et al.*, 1998). Porter (1980), for example, suggests that management role is to analyse the environment, choose a best-fit strategy from a defined set of generic strategies and to evaluate and define goals (based on four categories of questions: internal consistency, environmental fit, resource fit, communication and implementation).

Management role in an emergent strategy formation process is less obvious however, as seen in the HiCo action research study (Chapter 4) and in literature. It can exist in different forms. HiCo's management role, in intended strategy formation, included proactive roles such as long term planning, setting goals and choosing the portfolio of markets and products. Several cases from HiCo reflected how management reacted to a bottom up emergent initiative or to market trends. It also showed how management proactively tried to set some preconditions for emergence (i.e. diversification, bottom up ideas generating, employee empowerment).

Brown and Eisenhardt (1998) claim that although strategy should be unpredictable, uncontrolled, inefficient, continuous and diverse, management should not be passively watching for the occasional discontinuity or waiting for other firms to move before taking actions. They state that management should try to anticipate, where possible, and lead the change. Ambrossini and Bowman (2002) claim routines might be a source of advantage; therefore what causes success in an organisation is idiosyncratic to each organisation. They suggest that the role of the manager and of the strategist and their vocabulary should change. This suggests that perhaps one needs to start to understand strategy as recognising organisation routines and maybe the word manage needs to be replaced by words such as protect, nurture and leverage rather than control, monitor and plan (Bartlett and Ghoshal, 1997).

Various scholars present preconditions for strategy emergence (Brown and Eisenhardt, 1998; Wood, 1999; Hamel, 2001 and Olson and Eoyang, 2001). Hamel (2001) for example states that like all forms of complexity, strategy is poised on the border between perfect order and total chaos, between absolute efficiency and blind experimentation, between autocracy and complete ad hococracy. Hamel (2001) believes that there are five preconditions for the emergence of strategy these are encouraging new voices, new conversations, new passions, new perspectives and new experiments. Olson and Eoyang (2001) suggest that the role of management is to help identify significant differences, to establish transforming exchanges that will make the differences generative, and to articulate the self-organising patterns that emerge.

Weick (2000) suggests that to support the properties of sense making in the organisation, decision management must encourage conversation, give people a distinct stable sense of who they are and what they represent, preserve elapsed data and legitimatise the use of those data, enhance the visibility of cues, enable people to be resilient in the face of interruptions, encourage people to accumulate and exchange plausible accounts, and encourage action.

The Strategy Formation Matrix is designed to serve as a framework to support further theoretical and real world research in two ways. Firstly between the blend of intended and emergent strategy formation process and secondly between the management role characteristic in the strategy formation process in terms of proactive and reactive characteristics. The Strategy Formation Matrix (Figure 5-1) consists of two dimensions, creating four quadrants. The vertical dimension represents the type of strategy formation process, intended versus emergent, while the horizontal dimension represents the management role in strategy formation, which can be reactive or proactive.

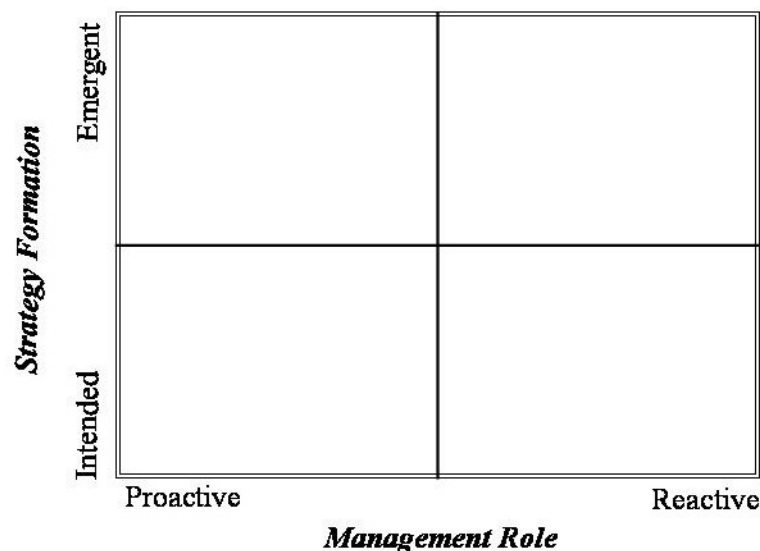


Figure 5-1: Strategy Formation Matrix (developed by the author)

Building on this matrix the author has identified four characteristics for the quadrants of the matrix. These are named, by the author as the Navigator, Enabler, Environmental and Collective quadrants (Figure 5-2):

- Navigator - where management role is characterised as mainly proactive in a predominantly intended strategy formation process.
- Collective - where management role is characterised as mainly reactive in a predominantly intended strategy formation process.
- Environmental – where management role is characterised as mainly reactive in a predominantly emergent strategy formation process.
- Enabler – where management role is characterised as mainly proactive in a predominantly emergent strategy formation process.

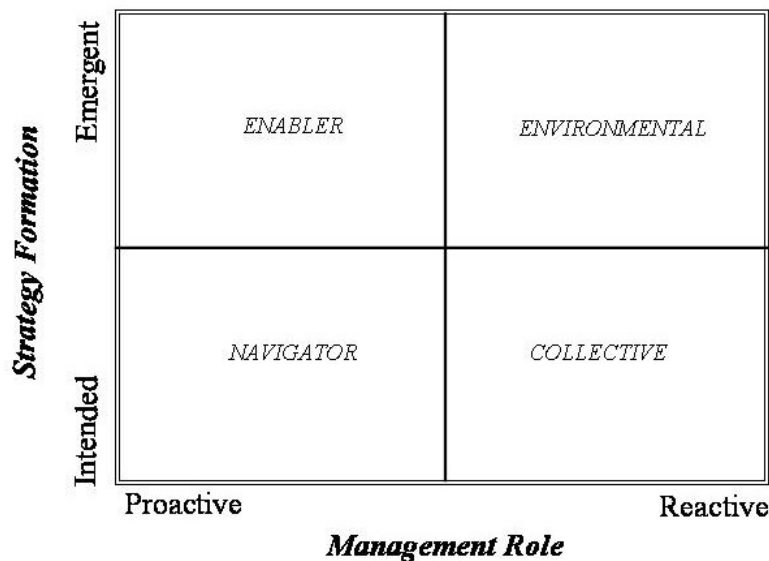


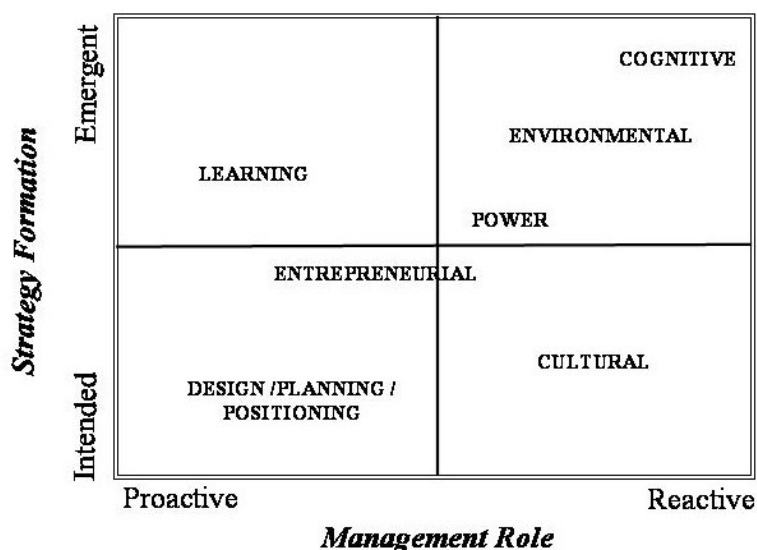
Figure 5-2: Strategy Formation Matrix Quadrants (developed by the author)

### 5.3 Schools of Thought

Strategy management can be categorised into various schools of thought. The schools and their projection on the Strategy Formation Matrix are investigated in the next sections through the Navigator, Collective, Environmental and Enabler quadrants. The investigation is based on examples from three main sources, chosen for their well-established and complimentary position in strategic management research.

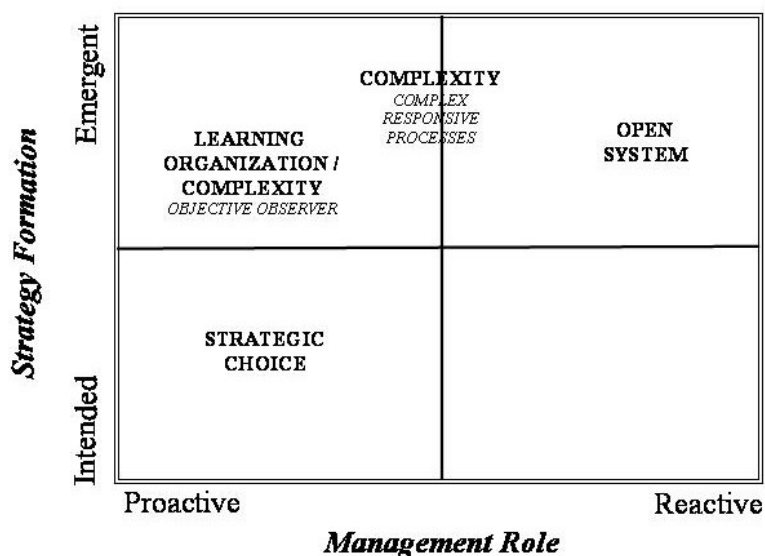
Mintzberg *et al.* (1998) offers a critical, penetrating look at the contributions and limitations of ten dominant schools of strategic thought. Mintzberg *et al.* (1998) create a comprehensive and illuminating tour through the fields of strategic management, shaping each of ten different approaches into a coherent school of strategy formation.

The ten different schools for strategy formation are: Design, Planning, Positioning, Entrepreneurial, Cognitive, Learning, Power, Cultural, Environmental and Configuration. Figure 5-3 describes the projection of nine of the schools onto the Strategy Formation Matrix. The Configuration School is not mapped due to the fact that the premises of the configuration school encompass those of the other schools, but each in a well-defined context. This issue will be discussed in further length in the summary section.



**Figure 5-3: Mintzberg et al. (1998) School's projection on to the strategy formation matrix**

The second source is based on Stacey (2000) who focuses on a radically different approach to strategic management. The central tenets of this approach are concerned with unpredictability and the limitations of control, and argue against the rational models of planning and control covered in other strategy textbooks.

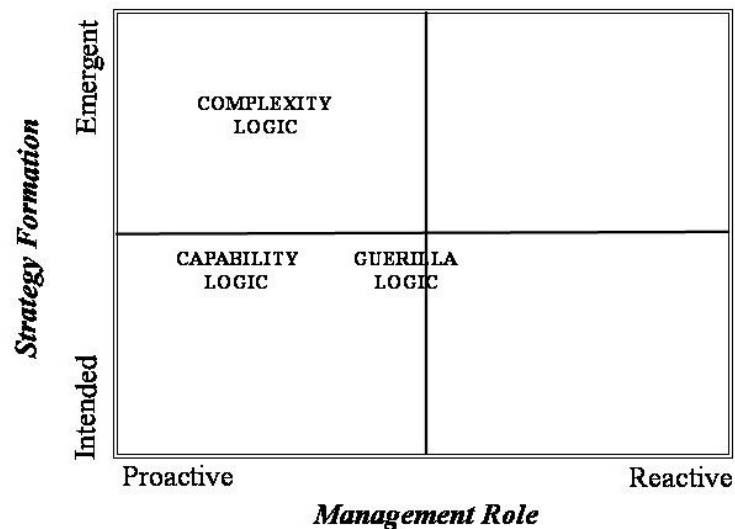


**Figure 5-4: Stacey (2000) School's projection on to the strategy formation matrix**

Five theories are presented and investigated: Strategic Choice, Learning Organisation, Open System and the radical perspective of *Complexity* that includes two sub categories - Objective Observer and Complex Responsive Processes. Figure 5-4 represents the schools of thoughts projection on the Strategy Formation Matrix.

The third source, Lengnick-Hall and Wolff (1999) present the logical foundations shaping three prominent streams of strategic management thought: Capability Logic, Guerrilla Logic and Complexity Logic. The three streams are summarised, compared and contrasted proving they provide alternate and competing explanations for effective strategy actions.

Figure 5-5 represents Lengnick-Hall and Wolff's (1999) strategic streams, and their positions on the Strategy Formation Matrix.



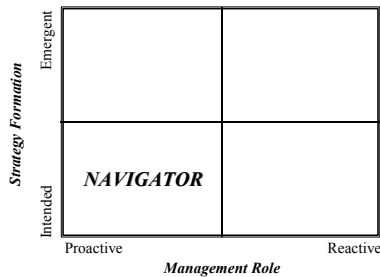
**Figure 5-5: Lengnick-Hall and Wolff (1999) School's projection on to the strategy formation matrix**

Since complexity oriented theories are of special interest to the research, several additional sources will be discussed. These sources include Kauffman (1995a), Zohar (1997), Brown and Eisenhardt (1998), Wood (1999), and Beinhocker (1998).



## 5.4 Schools within the Navigator Quadrant

The Navigator quadrant is positioned in the bottom left side of the Strategy Formation Matrix (Figure 5-6) and is defined as a process where management role is characterised as mainly proactive in a predominantly intended strategy formation process. The following schools can be projected onto this quadrant:



**Figure 5-6: Navigator quadrant**

- Mintzberg *et al.* (1998): Design, Planning, Positioning and Entrepreneurial (Figure 5-3).
- Stacey (2000): Strategic Choice (Figure 5-4)
- Lengnick-Hall and Wolff (1999): Capability Logic and Guerrilla Logic (Figure 5-5).

Mintzberg *et al.* (1998) offer four different schools that can be related to the Navigator classification. The Design School, first presented in the 1960's, is based on strategy formation as a process of conception. Strategy

formation should be a deliberate process of conscious thought. The CEO is considered the strategist responsible for the control and consciousness of the organisation. The model of strategy formation must be kept simple and informal; strategies should be one of a kind: the best ones result from a process of individualised design – creative act to build on distinctive competence. The leadership style is described as dominant and judgemental. The school offers little room for instrumentalist views or emergent strategies, which allow formulation to continue during and after implementation. The projection (Figure 5-3) of the Design School on the Strategy Formation Matrix therefore represents an intended strategy formation process where the management role is characterised as proactive.

The Planning School (Mintzberg *et al.*, 1998), which peaked during the 1970's, is based on Strategy making as a more detached and systematic process of formal planning. The model is the same as the design school, but its execution was prescribed to be highly formal. Strategies result from a controlled, conscious process of formal planning, composed of distinct steps, each delineated by checklists and supported by techniques. Responsibility for the overall process rests with the chief executive in principle; responsibility for its execution rests with staff planners in practice. The leadership style is said to be responsive to procedures. Strategies appear from this process fully developed, and made explicit so that they can then be implemented through detailed attention to objectives, budgets, programs, and operating plans of various kinds. The projection (Figure 5-3) of the Planning School on the strategy formation matrix therefore represents an intended strategy formation process where the management role is characterised as proactive in the strategy formation process.

The Positioning School (Mintzberg *et al.*, 1998) is less concerned with the process of strategy formation than with the actual content of strategies. Most notable in this school has been one simple and revolutionary idea, for better and for worse. Both the planning and design schools put no limits on the strategies that were possible in any given

situation. The positioning school, in contrast, argued that only a few key strategies—as positions in the economic marketplace—are desirable in any given industry: ones that can be defended against existing and future competitors. Porter (1980) suggested that an effective competitive strategy takes offensive or defensive action in order to create a defensible position against five competitive forces: threat of new entrants, bargaining power of firm's suppliers, bargaining power of firm's customers, threat of substitute products and intensity of rivalry among competing firms. Porter suggests three generic strategies in coping with the five competitive forces in order to out perform competitors in the industry: overall cost leadership, differentiation and focus. The positioning school includes the various corporate portfolio models such as BCG, GE/McKinsey, Shell/DPM, Product-Market evolution model, ADL and risk-return (Segev, 1995). Management's role is to choose a generic strategy based on quantitative data analysis and leadership style is said to be responsive to analysis. The projection (Figure 5-3) of the Positioning School on the Strategy Formation Matrix therefore represents an intended strategy formation process where the management role is characterised as proactive in the strategy formation process.

The most central concept of the Entrepreneurial School (Mintzberg et al.'s, 1998) is vision: a mental representation of strategy created or at least expressed in the head of the leader. The process of strategy formation is semi-conscious at best, rooted in the experience and intuition of the leader. The entrepreneurial mode is characterised by dramatic leaps forward in the face of uncertainty where growth is the dominant goal of the organisation. Entrepreneurial strategy tends to be deliberate and emergent—deliberate in overall vision and emergent in how the details of the vision unfold. The leadership in the entrepreneurial school is described as dominant and intuitive. The entrepreneurial approach is risky, hinging on the health and whims of individuals (Mintzberg *et al.*, 1998). Collins and Porras (1995) suggested that it is better to build a visionary organisation than to rely on a leader with mere vision. The projection (Figure 5-3) of the Entrepreneurial School on the Strategy Formation Matrix therefore represents a blend of the intended and emergent strategy formation processes where the management role is characterised as mix of proactive and reactive in the strategy formation process.

Stacey (2000, pg. 134) states that the primary focus of Strategic Choice theory is on intention and control, it prescribes a role for managers in terms of making choices and staying in control as individuals. It emphasises the installation of large numbers of negative feedback control systems relating to information, actions and behaviour. It depicts leadership as the function of directing, inspiring and choosing the shape, position and strategic direction of whole organisations. It focuses attention on stability, consistency and harmony. The projection (Figure 5-4) of the Strategic Choice School on the Strategy Formation Matrix therefore represents an intended strategy formation process where the management role is characterised as proactive in the strategy formation process.

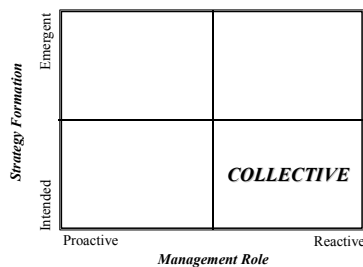
Lengnick-Hall and Wolff's (1999) Capability Logic school of thought rests on the selection, development, enhancement and exploitation of a deliberately chosen set of elemental, building-block competencies and assets that are isolated from imitation and appropriation by competitors. Structures and systems are designed to nurture, protect and exploit these key capabilities and resources in ways that enable a firm to create a

deliberate, path-dependent future to achieve a sustained competitive advantage. Resources and capabilities can originate from different areas of the company and it is the task of strategists to identify those that can be used to differentiate the organisation from its competitors (Feurer and Chaharbaghi, 1995). Top management real responsibility is a strategic architecture that guides competence building (Prahalad and Hamel, 1990). The projection (Figure 5-5) of the Capability Logic on the Strategy Formation Matrix therefore represents a mix of an intended and emergent strategy formation process where the management role is characterised as proactive in the strategy formation process.

Guerrilla Logic (Lengnick-Hall and Wolff, 1999) concentrates on destabilising the current reality so that a series of temporary, and often incompatible, advantages lead to high performance. Guerrilla logic relies upon inventive, uncommon and often unconventional means. Strategies based on guerrilla logic deliberately create disequilibrium and foster radical, unprecedented and unpredictable changes in tactics and direction over and over again. Individual initiative is coupled with organisational mechanisms that repeatedly disintegrate and reintegrate activities over time and across projects. The projection (Figure 5-5) of the Guerrilla logic on the Strategy Formation Matrix therefore represents an intended strategy formation process where management role is characterised as mix of proactive and reactive, mainly to the environment, in the strategy formation process.

## 5.5 Schools within the Collective Quadrant

The Collective quadrant (Figure 5-7) is positioned on the bottom right side of the Strategy Formation Matrix and is defined as a process where the management role is characterised as mainly reactive in a predominantly intended strategy formation process. The following schools can be projected onto this quadrant:



**Figure 5-7: Collective quadrant**

- Mintzberg *et al.* (1998): Cultural School (Figure 5-3).

In the Cultural School, strategy formation is described as a collective process. Mintzberg *et al.* (1998) describe the cultural school as concerning itself largely with the influence of culture in maintaining strategic stability, sometimes in actively resisting strategic change. Culture was discovered in management in the 1980s, largely due to the success of Japanese corporations. Strategy formation is a collective process of social interaction, based on the beliefs and understandings shared by the members of an organisation, with a symbolic style of leadership. Stacey (2000) defines culture as a set of assumptions people simply accept without question as they interact with each other. The projection (Figure 5-3) of the Cultural School on the Strategy Formation Matrix therefore represents an intended strategy formation process where the management role is mainly reactive to the collective intentions.

## 5.6 Schools within the Environmental Quadrant

The Environmental quadrant is positioned on the upper right side of the Strategy Formation Matrix (Figure 5-8) and is defined as a process where the management role is characterised as mainly reactive in a predominantly emergent strategy formation process. The following schools can be projected onto this quadrant:

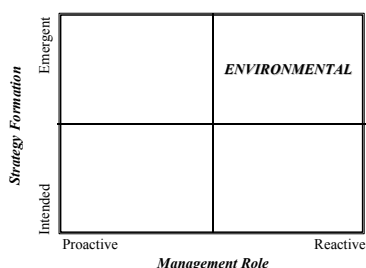


Figure 5-8: Environmental quadrant

- Mintzberg *et al.* (1998): Power, Cognitive and Environmental Schools (Figure 5-3).
- Stacey (2000): Strategic Choice Theory (Figure 5-4).

The Power School, described by Mintzberg *et al.* (1998), characterises strategy formation as an overt process of influence, emphasising the use of power and politics to negotiate strategies favourable to particular interests. Power

relations surround organisations; they can also infuse them. Mintzberg *et al.* (1998) made a distinction between two branches of this school. Micro power deals with the play of politics—of illegitimate and legitimate power—inside an organisation. Macro power concerns the use of power by the organisation. Strategies tend to be more emergent than deliberate and more likely in the form of position than perspective. To have arrived at a strategy politically usually means to have done so step-by-step through processes of bargaining. Mintzberg *et al.*, (1998) describe the leadership style here as weak (micro) and unspecified (macro). The projection (Figure 5-3) of the Power School on the Strategy Formation Matrix therefore represents an emergent strategy formation process where the management role is mainly reactive to the various internal or external interests and bargaining power of stakeholders.

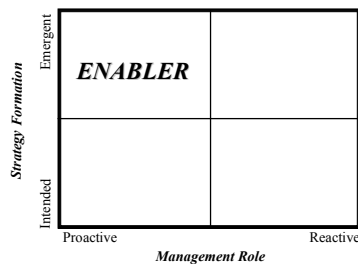
The Cognitive School, described by Mintzberg *et al.* (1998), is an evolving school of thought on strategy formation. Cognitivists assume that the brain processes symbols (electrochemical pulses) in a sequential manner to form representations of internal templates that are more or less accurate pictures of the world (Mintzberg *et al.*, 1998). This means that the brain is assumed to act as passive mirror of reality (Stacey, 2000). Strategy formation is a cognitive process that takes place in the mind of the strategist. Strategies thus emerge as perspectives—in the form of concepts, maps, schema, and frames—that shape how people deal with inputs from the environment. These inputs (according to the objective wing of this school) flow through all sorts of distorting filters before they are decoded by the cognitive maps, or else (according to the subjective wing) are merely interpretations of a world that exists only in terms of how it is perceived. The seen world, in other words, can be modelled, framed, and constructed. Concepts and strategies are difficult to attain in the first place, considerably less than optimal when actually attained and subsequently difficult to change when no longer viable (Mintzberg *et al.*, 1998). The projection (Figure 5-3) of the Cognitive School on the Strategy Formation Matrix therefore represents an emergent strategy formation process where the management role is mainly reactive, although it might not be perceived as such by managers.

The Environmental School describes strategy formation as a reactive process (Mintzberg *et al.*, 1998). The environment, presenting itself to the organisation as a set of general forces, is the central actor in the strategy-making process. The organisation must respond to these forces, or else be selected out. Leadership thus becomes a passive and powerless element for purposes of reading the environment and ensuring proper adaptation by the organisation. Organisations end up clustering together in distinct ecological-type niches, positions where they remain until resources become scarce or conditions too hostile, and unless they adapt, they die. The Environmental School has its roots in contingency theory, based on the common-sense realisation that different situations give rise to different behaviours. Some of the dimensions of the environment responsible for the differences one observes in organisations are stability, complexity, market diversity and hostility. The projection (Figure 5-3) of the Environmental School on the Strategy Formation Matrix therefore represents an emergent strategy formation process where the management role is mainly reactive to the environment.

Stacey's (2000) Open System is based on the concept that organisms, as well as human organisations and societies, are open systems. They are systems because they consist of a number of component subsystems that are interrelated and interdependent on each other. They are open because they are connected to the environment, or super-systems, of which they are a part. As the environment becomes more complex and as organisations grow in size, companies differentiate into functions. Research shows that the more unpredictable the environment becomes, the more decentralised the organisation becomes, pushing the focus of decision making down the hierarchy. The Open System concept is similar in many ways to the Environmental School, and is projected (Figure 5-4) on the Strategy Formation Matrix as an emergent strategy formation process where the management role is mainly reactive to the environment.

## 5.7 Schools within the Enabler Quadrant

The Enabler quadrant is positioned on the upper left side of the Strategy Formation Matrix (Figure 5-9) and is defined as a process where the management role is characterised as mainly proactive in an emergent strategy formation process. The following schools can be projected onto this quadrant:



**Figure 5-9: Enabler quadrant**

- Mintzberg *et al.* (1998): Learning School (Figure 5-3).
- Stacey (2000): Learning Organisation and Complexity theories (Figure 5-4).
- Lengenick-Hall and Wolff (1999): Complexity Logic (Figure 5-5).
- Additional complexity oriented theories: Kauffman (1995a); Zohar (1997); Brown and Eisenhardt (1998); Wood (1999) and Beinhocker (1998).

Mintzberg *et al.*'s (1998) Learning School and Stacey's (2000) Learning Organisation are characterised quite similarly. Stacey (2000) emphasises the double-loop learning process. Single-loops of organisational learning take the form of negative feedback loops in which groups of people review and learn from actions they have just undertaken. Double-loop learning is partly the negative feedback learning about the consequences of actions, but also partly an amplifying, positive feedback loop of questioning the underlying assumptions. Mintzberg *et al.* (1998) states that *"This learning proceeds in an emergent fashion, through behaviour that stimulates thinking retrospectively, so that sense can be made of action ... the successful initiative creates streams of experiences that can converge into patterns that become emergent strategies ... The role of leadership thus becomes not to preconceive deliberate strategies, but to manage the process of strategic learning, whereby novel strategies can emerge. Ultimately, then, strategic management involves crafting the subtlety between thoughts and actions, control and learning, stability and change"* (pg, 196). De Geus (1997) claims the only sustainable competitive advantage may be the ability to learn faster than your competitors.

The projection of Mintzberg *et al.*'s (1998) Learning School (Figure 5-3) and Stacey's (2000) Learning Organisation (Figure 5-4) on the Strategy Formation Matrix therefore represents emergent strategy formation processes where the management role is proactive in managing the process of strategic learning. Although the Learning School is presented independently from Complexity, there are some that view complexity as a niche within the learning school (for example Mintzberg *et al.* (1998) and Stacey (2000) – relating to the objective observer view of complexity).

Diversification is one of the major building blocks of complexity studies. Therefore it is not surprising that one witnesses a wide variety of interpretations. Due to the

researcher's specific interest in complexity, several additional sources (Brown and Eisenhardt, 1998; Wood, 1999; Beinhocker, 1998; Kauffman, 1995a and Zohar, 1997) are investigated and projected onto the Strategy Formation Matrix. As Figure 5-10 presents, from the Strategy Formation Matrix three main interpretation categories are identified: a totally emergent interpretation, a blend of emergent and intended interpretations and a blend of proactive and reactive interpretations of complexity.

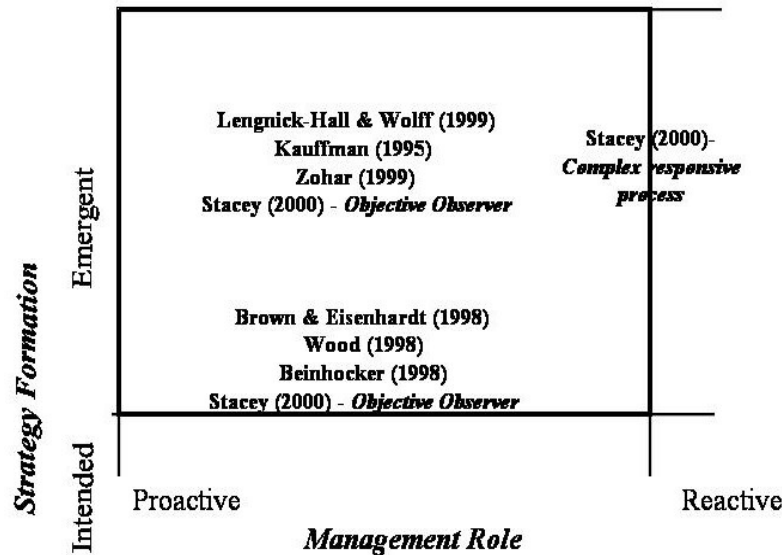


Figure 5-10: Projection of complexity views on Enabler Quadrant

### 5.7.1 Blend of Emergent and Intended Interpretations of Complexity

Some complexity management perspectives can be categorised based on their tendency to incorporate a blend of emergent and intended strategy formation processes where the management role is proactive. These theories are projected onto the Strategy Formation Matrix between the Navigator and Enabler quadrants (Figure 5-10).

Brown and Eisenhardt (1998) conceive management role as to produce “*Strategy as structured chaos*”. They claim that the strategy formation methodology is unpredictable, uncontrollable, often inefficient, yet a singularly effective one in the era driven by change. Organisations should continuously allow a flow of competitive advantages to emerge that form a semi coherent direction. By linking the practical concerns of business managers to complexity and evolution they recommend a strategy that harnesses the dynamic nature of change to create a continuous flow of competitive advantages. “*The strategic challenge ... is to manage change by reacting when necessary, anticipating wherever possible, and leading change when the circumstances are right*” (Brown and Eisenhardt, 1998, pg 7). Management is specifically called to take a proactive role.

Wood (1999) proposed the following definition of strategy based on complexity: “*The process by which an organisation generates, develops, and maintains a robust business design capable of both exploiting its current distinctive capabilities (its fitness function) on or near its current fitness peak (and) exploring its strategic landscape and business*

*ecosystem for entrepreneurial opportunities beyond the lifecycle of its current business design (its sustainability function) away from its current peak”* (pg 5). The management has a proactive role as enabler to set the direction that is bounded by the rules (both written and unwritten), by which a firm exploits and explores the landscape and business ecosystems. Exploitation rules are what must be done to be economically viable and politically legitimate with stakeholders. Exploration rules define how to search the strategic landscape and business ecosystems and what is being looked for (scanning) for economic survival.

Beinhocker (1998) predicts that as a complexity-based view of economics develops, new tools will be devised to help managers fashion better-evolving companies. Some of these tools will be analytical, for example options theory and evolutionary modelling to help develop robust strategies. Others will be conceptual, for example new organisational forms that help avert complexity catastrophes, or practices that promote a rich fund of ideas.

### ***5.7.2 Totally Emergent Interpretation of Complexity***

Some complexity scholars tend to interpret complexity as an emergent strategy formation process. These theories are projected on the Enabler Quadrant, where the management role is characterised as mainly proactive in an emergent oriented strategy formation process (Figure 5-10).

Lengnick-Hall and Wolff (1999) state that as an organisation becomes more complex, emergent strategies will overtake intended strategies. Complexity core logic means that firms and units can generate intelligent, effective responses to the need for change without externally imposed plans or directions. Complexity logic concentrates on designing and maintaining integrated, but non-linear, system-wide processes with the expectation that they will yield a variety of useful results. The complexity perspective is community-based, emergent, non-linear, unpredictable, culture bound, and requires substantial investment in human capital and process management techniques. Kauffman (1995b) explains the potential of breaking a company into patches to balance order and chaos, and claims that each patch attempts to optimise solely for its own selfish benefit and can lead, as if by an invisible hand, to the greater welfare of the whole organisation. Zohar (1997) compares between the old management paradigm (Newtonian) and the new management paradigm (Quantum). Some of its main themes are: uncertainty, unpredictability, rapid change, non-hierarchical networks, multifunctional effort, interacting centres, responsive and flexible structures and bottom-up experimental operation.

### ***5.7.3 Blend of Proactive and Reactive Interpretation of Complexity***

Stacey (2000) refers to the above interpretations (totally emergent interpretation, blend of emergent and intended interpretation) as retaining the assumptions of the autonomous, even heroic, individual and prescription of the manager as the objective observer and of the organisation as a system. Furthermore, he argues that the result is the re-presentation of strategic choice and learning organisation theory in a different



vocabulary. The interpretation of complexity thus remains within the orthodox view of management and organisational theory.

Stacey (2000) adopts a more radical perspective to strategy formation based on complexity that he calls Complex Responsive Process (CRP). Intention emerges in the self-organising process of ordinary conversation between people. Change occurs in novel ways through the presence of sufficient diversity in organising themes. This is expressed in free-flowing conversation in which shadow themes test the boundaries of the legitimate. Managers cannot think of themselves in terms of organisational designers but rather as active participants in a complex process. The projection (Figure 5-10) of the Complex Responsive Process complexity perspective on the Strategy Formation Matrix therefore represents an emergent strategy formation process where management role is characterised as a blend of proactive and reactive participation in the process.

## 5.8 Summary

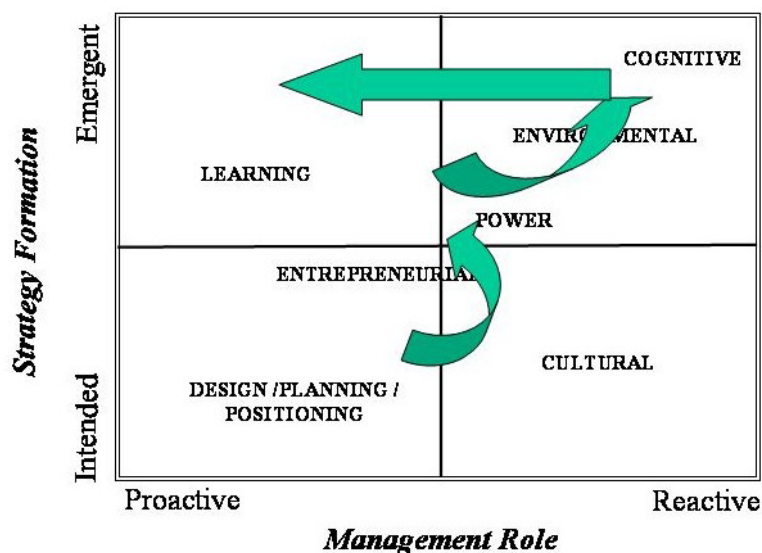
The various projections on the Strategy Formation Matrix reflected how different strategy schools incorporate different blends of intended and emergent strategy formation processes and how the management role in strategy formation varies in its level of proactive involvement. In the Learning School, for example, strategy is mainly emergent while in the Strategic Choice School it is mainly intended. The Capability School tends to incorporate a blend of intended as well as emergent strategy formation process. The Environmental School is an example of management reacting to the environment, while in the Planning School; management allocates great effort to proactively planning the company's future actions.

Complexity studies can be categorised into several groups representing different views on management's role in the strategy formation process and the blend of intended and emergent strategy. Wood (1999) calls for continued exploitation and exploration. Hamel (2000) thinks strategy is mainly about variety. He also points out that in most companies there is no distinction between a conversation about business concept innovation and a conversation about how to improve the operational performance of an existing business. The need for a mix of strategy could be related to the complexity concept of the Edge of Chaos. In the natural world the richest forms of life exist on the edges, between sea and land, forest and field etc therefore *"Selecting the right degree of configuration is a complex balancing act. Managers must avoid the baldness or chaos of too little configuration while skirting the obsession of too much. Excellent wines have complexity and nuance, blending together different tastes into harmonious balance"* (Miller, 1996; in Mintzberg *et. al.*, 1998, pg 346).

Several scholars pursue the idea that during an organisational life-cycle, management should endure different best-fit strategies at different times. Mintzberg *et al.*'s (1998) Configuration School encompasses those of the other schools, but each in a well-defined context. They state that *"Most of the time, an organization can be described in terms of some kind of stable configuration of its characteristics... for a distinguishable period of time, it adopts a particular form of structure matched to a particular type of context which causes it to engage in particular behaviours that give rise to a particular*

*set of strategies...These periods of stability are interrupted occasionally by some process of transformation—a quantum leap to another configuration” (pg 305).*

Figure 5-11 illustrates Mintzberg *et al.*'s (1998) nine schools projected on the Strategy Formation Project and arrows representing quantum leaps from one strategy to another.



**Figure 5-11: Illustrations of potential quantum leaps (based on Mintzberg *et al.*, 1998)**

Mintzberg *et al.*, (1998) explain that these successive states of configuration and periods of transformation may order themselves over time into patterned sequences, for example describing life cycles of organisations. They state “*The key to strategic management, therefore, is to sustain stability or at least adaptable strategic change most of the time, but periodically to recognize the need for transformation and be able to manage that disruptive process without destroying the organization*” (pg 346).

Lengnick-Hall and Wolff (1999) claim that effective strategy formulation and implementation requires a coherent and logically consistent strategy frame. A look at the many contradictory premises across the three paradigms they analyse (Complexity, Capability and Guerrilla Logic) makes it clear that a strategy derived from more than one core logic at a single point in time violates this requirement. At best the results of such cross-fertilisation might be confusion and efforts applied at cross-purposes. More likely, a strategy that relies concurrently on more than one of these core logics offers a high probability for dysfunction within the firm and ultimate failure of the firm's activity in the marketplace.

HiCo's action research study (Chapter 4) suggests the company endured different blends of strategy formation at different times. In 2003, for example, the strategy formation process was less intended than the strategy formation in one of its business units in 2002. Management role in the strategy formation process shifted with time to a more proactive role. Chapter 6 will investigate, from a sample of companies of different sizes and from different industries, how managers perceive and project their position on the Strategy Formation Matrix, and whether the position differs between companies and within companies over time.

# 6 Organisations and Strategy Formation

*The aim of this Chapter is to investigate the strategy formation process in six organisations in relation to the Strategy Formation Matrix. The Chapter describes the multiple-cases investigation, outlines the limitations and strengths of the research approach adopted and summarises the outcomes of the investigation.*

## 6.1 Introduction

The previous chapter (Chapter 5) introduced and theoretically investigated the Strategy Formation Matrix. The aim was to offer a model representing the blend of intended and emergent strategy formation process on one side and the type of management role on the other. This chapter, using multiple-case studies, conducts an empirical inquiry that investigates the strategy formation process in different companies within their real-life contexts. Companies project their perceived position on the Strategy Formation Matrix which is presented and investigated here, validating the model as a basis for further expansion.

The research method adopted for this part of the study involved a multiple case study approach. As outlined in Chapter 3, a case study is an inquiry that investigates within a real-life context and relies on multiple sources of evidence (Yin, 1994). Yin (1994) states that “Any use of multiple-case designs should follow a replication, not a sampling, logic, and an investigator must choose each case carefully. The cases should serve in a manner similar to multiple experiments, with similar results (a literal replication) or contrasting results (a theoretical replication) predicted explicitly at the outset of the investigation” (pg 51). Hartley (1994) claims that case studies are ‘meaningful’ and ‘rich’ compared with the sometimes ‘dustbowl’ empiricism of

quantitative techniques. Within this multiple cases approach, the researcher did not act as participant observer but rather as an investigator with prior development and theoretical propositions to guide data collection and analysis.

For confidentiality reasons the company information of the participants in the multiple cases study are anonymous. However their identities were not turned to fictitious ones like suggested in some research cases (Yin 1994 pg144). All relevant information concerning background, type of products, strategic challenges, strategy formation process and chronological events are presented accurately. A serial number and a letter representing the company size replace the actual name (for example L5 corresponds to researched company number five, classified as a large company). Small size companies were defined as employing less than fifty employees, medium size as employing more than fifty and less than two hundred and fifty employees while large companies employ more than two hundred and fifty employees.

The six companies in the multiple-cases study, presented in Table 6-1, were chosen based on their diversified characteristics in terms of size, line of business and geographical origin (all European based). A section is dedicated to each individual case study report.

**Table 6-1: List of researched companies within the multiple cases study**

Company	Size	Short Name	Section
Multinational Design and Manufacturing Company	Large	L5	6.2
Global Financial Company	Large	L7	6.3
Industrial Design Company	Medium	M2	6.4
Software Company	Medium	M3	6.5
High Precision Parts Manufacture Company	Small	S3	6.6
Biotechnology Company	Small	S5	6.7

Data collection began in June 2002 and ended in February 2004, consisting of multiple sources such as workshops, interviews, surveys, internal documents and external documents – for example newspapers and Internet sites. Data collection included an initial background survey (Appendix C), Management role Environment Networking Importance (MENI) Analysis (Appendix E), strategy formation process workshop analysis (Appendix F), context analysis workshop (Appendix G) and an industry structure analysis (Appendix H). Along the course of the research, several discussions were held with company managers for clarification and sense making.

## **6.2 Multinational Conception and Manufacturing Company (L5) – Case Study**

### **6.2.1 Background**

L5 is a multinational leader in the design and manufacture of interior automotive components and modular systems. L5 started as a small family business over half a decade ago. The company strategy and organisational structure shifted in the last half-century several times, supporting entrance into new markets, growth and geographical expansion. L5 accompanied its customers all over the world, locating technical-commercial offices near the most important decision centres of the automotive industry. The company has global presence in over 17 countries with over 50 technical-commercial, production and logistics centres. L5 has witnessed substantial growth for the last decade. Its future long-term business plan incorporates plans to expand its product line and geographical distribution in order to reach an average yearly growth rate of over 15% until 2007. L5's sales channels are through Original Equipment Manufacturers (OEMs) or major integrators. The market is relatively competitive and includes several major players as well as the risk of some newcomers. Technology trends could be substantial in the next few years shifting to new materials and production techniques.

L5 has a matrix organisational structure, where along with geographical territory managers there are cross-territories project managers. The company relies partially on strategic alliances and networked suppliers for several technologies and services such as electronics, stamping parts and synthetic fibres. One of the main risks and complications the company endures is having a dual-relationship with some of the suppliers that are also market competitors or have the potential of becoming a competitor.

### **6.2.2 Strategic Challenges**

Precise definition of policies and strategies has driven L5 to occupy a leading position in the market, based on important strengths that include industrial presence worldwide, technical and commercial offices in countries where clients make their key decisions, and an industrial organisation based around small-scale, flexible production centres with a highly participative workforce. The following dilemmas and strategic challenges were identified in February 2004: maintaining growth, far-east penetration (a specific country), cheaper products, confronting security issues (improvements, regulations, etc.), innovation and new products, and new technologies and materials (for example electronics, magnesium).

### **6.2.3 Strategy Formation Process**

Table 6-2 represents examples of the perceived blend of intended and emergent activities taken by management (April 2003). Intended activities were defined as proactive initiatives taken by management in an intended strategy formation process.

Enabler activities were defined as proactive initiatives taken by management to support an emergent strategy formation process.

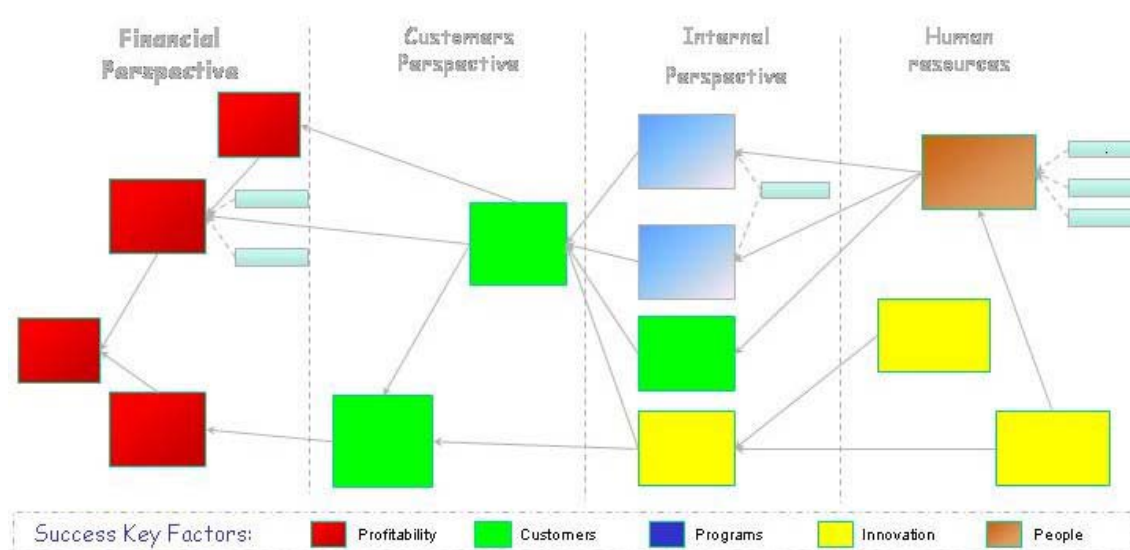
**Table 6-2: L5 examples of Intended and Enabler management activities**

Intended Activities	Enabler Activities
<ul style="list-style-type: none"> <li>• Strategic objectives management</li> <li>• Master Strategic Plan: Business plan + R&amp;D plan</li> <li>• Promote and improve internal procedures.</li> <li>• Six - Sigma: quality tool &amp; management procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Develop projects “inside” customer organisation. (Tech. Teams working within customer teams)</li> <li>• Promote indirect processes</li> <li>• Support trial and error and risk taking initiatives of new product development</li> </ul>

In terms of strategic objectives management, the company implemented the Balanced Scorecard (Kaplan and Norton, 1996, 2000) a well-known approach to strategic management developed in the early 1990's by Kaplan and Norton. The Balanced Scorecard approach provides a clear prescription as to what companies should measure in order to balance the financial perspective. The Balanced Scorecard suggests viewing the organisation from four perspectives (learning and growth, internal business process, customer and financial). The strategy map is a generic architecture for describing how an organisation intends to create sustained value for its shareholders (Kaplan and Norton, 2004). The map is founded on the idea that *“each measure of the Balanced Scorecard becomes embedded in a chain of cause-and-effect logic that connects the desired outcomes from the strategy with the drivers that will lead to the strategic outcomes”* (pg 69).

L5's value chain of cause and effect is communicated through a Strategy Map (Figure 6-2) presenting the chain of effects from achieving human resources targets to improving financial perspectives. Some of the goals included are employee motivation and productivity, innovation, customer support, new market penetration and growth.

Emergent strategy exists in L5 in various forms. Several examples of how new business and products emerged were collected (June 2003). One example of a bottom up initiative is of a research team that dared to use a new unconventional material, resulting in a first to market new generation of products (lower weight, lower price). Other sources of emerging business ideas included a project consisting of a diversified team from different departments and technical teams working at customer premises.



**Figure 6-1: Illustration of the L5 Strategy Map (actual targets are not provided to the reader and illustration is slightly changed from the source, for company privacy)**

Several examples reflecting the business environment characteristics were also collected (June 2003). One example is how the influence of fluctuating values of primary materials, such as polypropylene and oil, affect technological and financial decisions. Another example is the Argentina political scenario introducing turbulence into the company business in terms of production parameters, project budgets and revenues. Some of the business turbulence originates from suppliers, for example a two year working relationship with a supplier, on an advanced technological project, was terminated unexpectedly due to a competitor suddenly taking over the supplier.

Figure 6-2 presents L5's projection on the Management Role Matrix. The perception of strategy formation was collected in 2003. At that time, L5 was positioned between the Navigator and Enabler quadrant, with a blend of intended and emergent strategy formation processes. Management is characterised as playing a proactive role in strategy formation. This position is aligned with the examples given of intended measures such as implementing the Balanced Scorecard method and Six Sigma as well as examples of an enabling environment of trial and error in new product development.

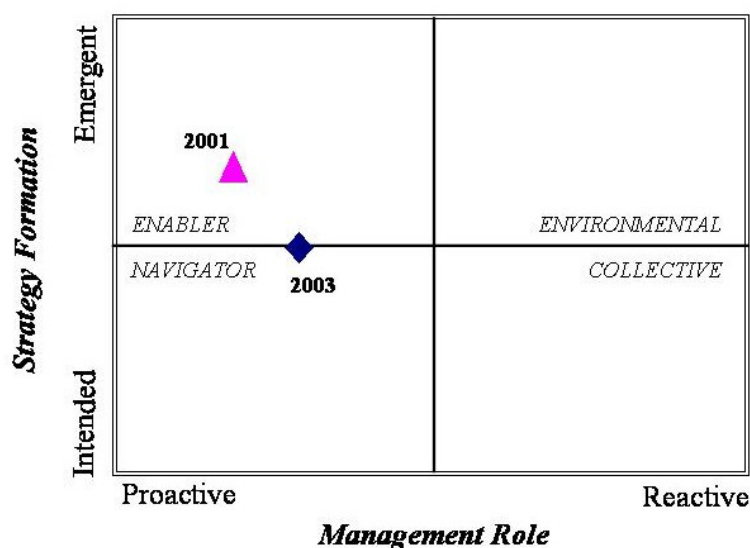


Figure 6-2: L5 perceived projection on the Strategy Formation Matrix (April 2003)

The perceived projection of L5 strategy formation processes in 2001 (recorded in 2003) was different from its 2003 position. Due to increased effort and support in innovation and penetration of new markets, management were perceived as more proactive two years earlier. The strategy formation process was characterised by a blend mainly dominated by emergent, positioned in the Enabler Quadrant of the Strategy Formation Matrix.

### 6.3 Global Financial Company (L7) – Case study

#### 6.3.1 Background

L7 helps its customers meet their long-term savings financial needs by offering flexible, custom-tailored solutions that incorporate a wide array of products and services. The company's competitive edge derives from the packaging of its products and its ability to build long-term relationships with its customers. L7's products are adapted to local markets and local needs. Long-term savings products differ from country to country since each product is market specific and subject to rules, taxes and other local market conditions. L7's strategy in 2000 was categorised by a newspaper article as a virtual organisation that used partnerships, networks, shared resources, and visions to handle turbulent markets and flexible production. The company was regarded as client-driven and a knowledge-intensive enterprise exploiting the relationship revolution that modern IT enables. The leader provided a shared vision, a strong brand, and a high-trust culture. Prior to 2001, L7 had witnessed geographical expansion and revenue growth for several subsequent years, resulting in high profits.

However, since September 11, 2001 (approximately) L7, along with other life insurers, has seen its profits eroded by plummeting stock markets and rising benefit costs. The company has been especially vulnerable to the economic downturn losing more than 90% of its value from a 2000 peak.



In 2003 a newspaper reported, *“Over the past year, L7 reputation has been badly damaged by a disastrous share price performance, the failure of a costly expansion into... sustained criticism...over [management action]...”* (The Financial Times Limited, 2003). One of the managers claimed at that time L7 was implementing *“tighter policies, stronger follow-up routines and improved clarity”*.

A market analyst suggested in 2003 that *“L7’s strategy of rewrapping other companies’ equity-linked products and selling them through independent financial advisers and broker-dealers, leaving the company with almost no overhead, served it well in a bull market, ... The company now needs to become “a producer and distributor, rather than a packager,” he said. “That will make it less vulnerable to the effects of falling equity markets.”*

The company is structured as a federative virtual network organisation of independent, yet interdependent, local business units and multiple centres of competence and innovation. In this type of organisation, the network replaces the traditional Head Office allowing each unit to adapt quickly to local environmental changes, yet still be able to draw upon the resources and knowledge of the global entity.

### **6.3.2 Vision and Strategic Challenges**

L7’s main vision themes include the following statements (October 2002) *“To be the leading provider of savings solutions”, “to be the best company to work for” and “to have a reputation as an innovative leader”*. These themes were clearly communicated internally and externally. The company witnessed several strategic challenges (collected October 2002). One of the substantial challenges was *“how to continually balance offering products and services that meet the constantly changing local market’s customers’ needs with global market perspectives in such a way that the result is a strong value-added benefit to the company”*. Other challenges included offering innovative new products and services in established markets, identifying and developing new markets both in terms of location (new countries) and new businesses, forecasting customer changing demands, continually developing staff to meet the changing demands and developing new strategic relationships with external partners.

However, L7 had to overcome some barriers and constraints to meet its strategic challenges. At the beginning of 2003, the company suffered from increased financial problems. Some of the identified problems in the strategy formation process included lack of resources, financial and share pressure placing emphasis on short-term issues, management turbulence distracting the company from identifying and addressing global problems and independence of local units reducing the ability of the global parent to directly affect the behaviour of local units.

### **6.3.3 Strategy Formation Process**

Table 6-3 represents examples of the perceived blend of intended and enabler activities taken by management (recorded in February 2003). Intended activities were defined as proactive initiatives taken by management in an intended strategy formation process.

Enabler activities were defined as proactive initiatives taken by management to support an emergent strategy formation process.

**Table 6-3: L7 examples of Intended and Enabler management activities**

Intended Activities	Enabler Activities
<ul style="list-style-type: none"> <li>• Business plan emphasis on profitability</li> <li>• Tighter business plan control from central office (concentration on profitability of current products, divesting non-profitable business units and non-core products)</li> <li>• Senior management “shake-up”</li> <li>• Enhanced corporate governance</li> <li>• Increased emphasis on global networking</li> </ul>	<ul style="list-style-type: none"> <li>• Create small futurist unit</li> <li>• Further develop strategic planning process</li> <li>• Experiment with position in value-chain</li> <li>• Develop (through exploration) a specific market</li> <li>• Allow a degree of freedom to local business units</li> <li>• Enable knowledge transfer between units</li> </ul>

In the past the company implemented a multi-level Balanced Scorecard based measurement system supported by unique self developed software. The company invested extensive resources in supporting knowledge management and innovation initiatives. However, as the company endured some financial and management difficulties, many of the knowledge management and innovation initiatives were reduced or stopped.

Figure 6-3 presents L7’s projection on the Management Role Matrix. The perception of strategy formation was collected in 2003. At that time, management role endured a blend of proactive and reactive actions while the strategy formation process was mainly intended oriented. L7 was positioned in the Navigator quadrant. This position was aligned with challenges and constraints identified such as “*financial and share pressure placing emphasis on short-term issues*” and “*management turbulence distracting the company from identifying and addressing global problems*”. An example of Intended strategy formation was enhanced corporate governance and tighter business control, while experimenting with their position in the value chain was given as an example of enabler activity.

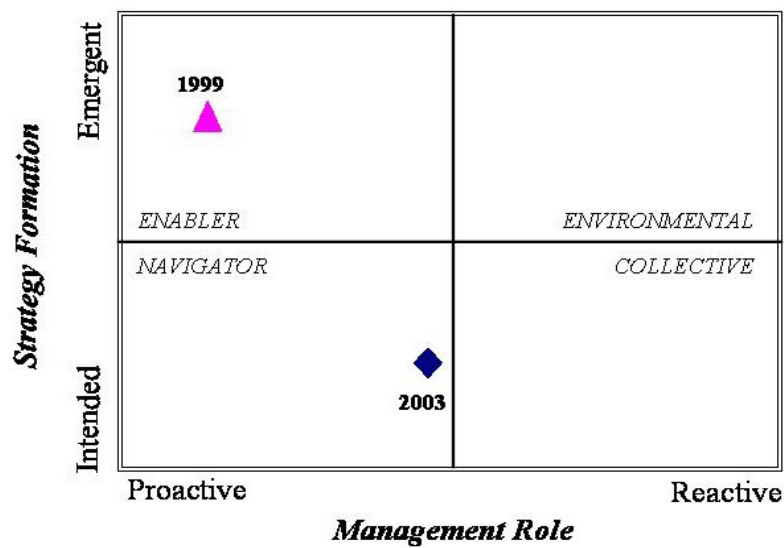


Figure 6-3: L7 perceived projection on the Strategy Formation Matrix (March, 2003)

The perceived projection of L7's strategy formation processes in 1999 (recorded in 2003) was different from its 2003 position. Management were perceived as more proactive. The strategy formation process is characterised by a blend of more emergent than intended, positioned in the Enabler rather than the Navigator quadrant of the Strategy Formation Matrix.

## 6.4 Industrial Design Company (M2) – Case study

### 6.4.1 Background

M2 was founded over 20 years ago as a small industrial design studio with 2 designers. Over the years, M2 evolved to a company with three divisions and offices located in three different countries. The company specialise in industrial design and product development. M2 has more than doubled its size and turnover in the five years prior to 2001.

M2's services cover the whole chain of product development starting from innovation strategy and management, to concept development, concept and detailed design, engineering, prototyping, and finally mould manufacturing coordination and subcontracting. Covering the whole chain, M2 offers a complete and integrated product development service, which requires a highly intensive cooperation and communication between M2 and its clients. M2 has created a strong relationship with its clients and gained a rich and broad experience and know how on product development for industrial companies.

In its ten years of existence, M2 has carried out over 500 projects for more than 70 different industrial companies from a high variety of sectors such as furniture, toys, electronics, white goods, informatics (computers and printers), hobby and professional tools, banking (pay dispensers and cash machines), ticketing devices, health/hospitals (information poles), machinery, bathrooms and toilets, mass products, and machine

control devices. M2 makes at least 35 products a year and advises its clients in services that range from design, engineering, innovation, or re-design to cost.

M2 main identity themes, as perceived by employees (June 2003) are: adaptability and flexibility, diversified capabilities, knowledge integration of service, and client focus.

#### **6.4.2 Vision and Strategic Challenges**

M2's vision (August 2002) incorporates two main trends. The first assumption is that the market will demand a complete *"end to end solution"*. The second is the belief that the company will have to be *"global in every sense"*. Aligned with the business dynamics, identified challenges (August 2002) include being able to construct a very adaptive business plan, managing people in a highly changeable environment and identifying technology, society, and economic trends. Defining the company's values is one way to cope with the challenges. As one executive explained; *"corporate philosophy is the most important thing – since a new M2 evolves every three years – but the dilemma is making this transformation while working with the same people and making them change with you."*

In February 2003 new challenges were identified shifting from previous emphasis to new ones. The company management increased control trying to achieve more with fewer resources. The transformation included a shift to more hierarchy, *"fitting people to boxes"*, which meant less empowerment and self-organisation. This trend continued in June 2003, where the following challenges were identified: clear target company, strict targets and resource allocation, quality control and progress reports. Management wanted to change old habits such as management mainly by intuition and decision-making based on personal relations. However several long-term goals were also identified such as investment in human capital competence to ensure the future and partnering in an effective way to support growth.

#### **6.4.3 Strategy Formation Process**

M2's culture and working environment endures teamwork and flexibility. In some projects the roles were not well defined, which added flexibility to the structure, and allowed the exchange of experiences and knowledge. One employee described it in the following way *"Roles are not formalised, but when teams are built, people rely on the team members, everyone assumes a role (the executor, the devil's advocate, the 'out of the box' thinker), depending on the kind of project that they are going to face"*.

Very often M2's type of business results in facing complicated challenges that has to be resolved in a short period. The working environment was defined as friendly, fun, with a young spirit, dynamic and enthusiastic (June 2003). Open thinking and emerging ideas were encouraged. Informal relationships existed and are described in the following quotes: *"We can say that M2 can be defined as a meritocracy, where freedom of thinking and expression is encouraged. The perception is of a 'flat organization', despite the fact that a hierarchy exists..."*; *"M2 is in general a small enough company to have more of a feeling of belonging as you can see the results of your ideas"*.

Table 6-4 represents examples of the perceived blend of intended and emergent activities taken by management (recorded on April 2003). Intended activities were defined as proactive initiatives taken by management in an intended strategy formation process. Enabler activities were defined as proactive initiatives taken by management to support an emergent strategy formation process.

**Table 6-4: M2 examples of Intended and Enabler management activities**

Intended Activities	Enabler Activities
<ul style="list-style-type: none"> <li>• Find larger clients / international clients / revisiting old clients.</li> <li>• Improved definitions of services.</li> <li>• New credentials documents.</li> <li>• Improve proposals of collaborative relationships with clients.</li> <li>• New internal management measures.</li> <li>• Setting sales targets.</li> <li>• Setting policies and procedures.</li> <li>• New compensation and performance terms.</li> <li>• New definition of responsibilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Establishing office days / rumours e-mail.</li> <li>• Nurturing internal proposals of all kind (Servicing, Social, etc).</li> <li>• Recruiting new profiles of people.</li> <li>• Scanning for new markets.</li> <li>• Expansion through new knowledge areas / sectors.</li> <li>• Flat informal relation, freedom of expression.</li> </ul>

M2's client interface usually consisted of one to three consultants from M2. This meant that the employee had the responsibility to represent the company, effect the project outcome and most importantly to scan for future business with the customer and within his market. Company policy was to hire unique blends of talents and strengths. The diversification was believed to allow interesting synergies resulting in innovative ideas. M2 was affected by the general economic cycle and also by seasonal cycles of the market. A proactive reaction of M2 management was to gather more diversified and bigger clients, communicate its value more effectively and thus be in a position to charge more for it.

Although M2's strategy formation was flexible, empowered and emergent, in 2003 after witnessing several years of consecutive growth intended measures were implemented. An overall strategy plan defining a clear customer base and focusing on building distinct capabilities was formed to improve profitability and reduce business cycle effects. A manager in M2 claimed that the company was good at organisational change when needed, however these changes were launched on a case-by-case initiative and not as part of an overall long-term plan.

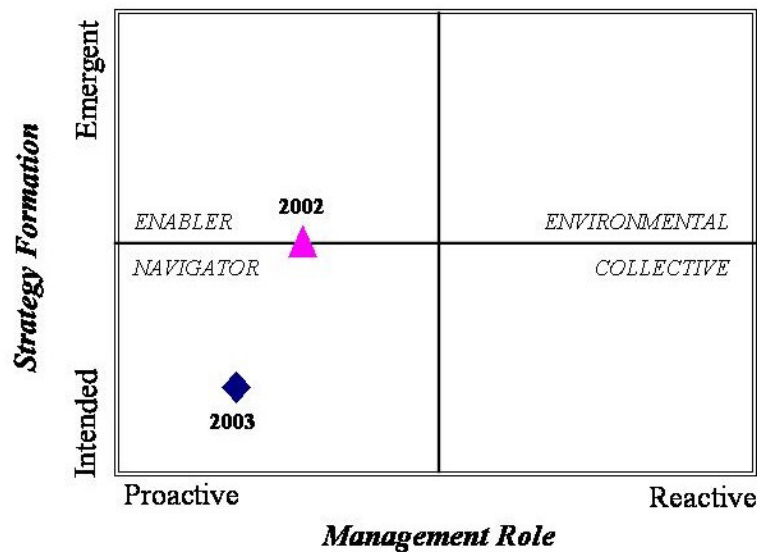


Figure 6-4: M2 projection on the Strategy Formation Matrix

The following goals were identified in June 2003: efficiency (time and profits), to be rigorous (keep on informing), internal homogeneity (same perception), and knowledge expansion (gathering knowledge). The company planned to take the following action to achieve the goals: consolidate business (bigger clients, delivering more benefits, having more profits and amplify the market presence), implement a process that allows constant and sustainable growth (new knowledge areas, always offering a service taking into account future needs and being proactive), duplicate the business model (new markets, new clients) and create a knowledge network.

Figure 6-4 presents M2's projection on the Management Role Matrix. The perception of strategy formation was collected in 2003. At that time, M2 was positioned in the Navigator quadrant, with a blend of mainly intended strategy formation process where management was characterised as proactive. This position is aligned with the examples given of intended measures such as setting targets, compensation and performance evolutions as well as examples of an enabling action such as nurturing internal proposals of all kind.

The perceived projection of M2 strategy formation processes in 2002 (recorded in 2002) is different from its 2003 position. Management is perceived as less proactive. The strategy formation process is characterised by a more balanced blend of both emergent and intended strategy, positioned between the Enabler and Navigator quadrants of the Strategy Formation Matrix.

## 6.5 Software Company (M3) – Case study

### 6.5.1 Background

M3 is a global software vendor with over 200 large company clients. M3 develops and designs solutions that enable corporations to better plan and optimise the human side of their business. M3's market strategy is based on alliances with consultants and systems

integrators. M3 addresses medium and large organisations, businesses as well as non-profit or government agencies, which need to improve their management and planning of Human Capital. The market is segmented by company size: small (less than 500 employees) medium (between 500 and 5,000 employees) and large (more than 5,000 employees). Geography also plays a role in segmenting the market, because Human Capital issues in many respects differ in different countries. Competition includes both large international players and local players active in one or two countries. In some local markets there are many local players, typically of a small or medium size. They normally have a background, and a solid market presence, based on payroll, benefits and time and attendance products. Their strength is typically coming from a strong relationship with their loyal customer base and competitive fees. Although in many cases these companies compete with M3, often they can be excellent candidates for a strategic partnership. The company was reborn as a spin-off several years ago.

### ***6.5.2 Vision and Strategic Challenges***

M3's vision (June 2003) was that it would be a major player globally in the domain of Human Capital Management and Planning software solutions, contributing to improving the performance of thousands of organisations worldwide. Some of M3's strategic challenges (June 2003) included shifts in identity. For example moving from analytical applications provider to highly focussed Human Capital software solutions provider, from local based company to worldwide vendor and from Software development competencies to business development competencies.

### ***6.5.3 Strategy Formation Process***

As a people-driven company, M3 regarded its employees as the key resource for achieving its business goals. Employees were considered and rewarded for their professional skills and attention to providing outstanding customer service. The organisation was quite flexible and a high internal job rotation was encouraged as one of the most important professional growth approaches. The management, both the top and the middle, were directly involved in the operations. An implemented employee investment plan and stock award plan strongly encouraged a deep participation of all the employees in the strategy formation process and the future plans of the company.

Table 6-5 represents examples of the perceived blend of intended and enabler activities taken by management (February 2003). Intended activities were defined as proactive initiatives taken by management in an intended strategy formation process. Enabler activities were defined as proactive initiatives taken by management to support an emergent strategy formation process.

**Table 6-5: M3 examples of Intended and Enabler management activities**

Intended Activities	Enabler Activities
<ul style="list-style-type: none"> <li>• Follow business plans</li> <li>• Financial targets/goals</li> <li>• New approaches (customers as partners)</li> </ul>	<ul style="list-style-type: none"> <li>• Involve people in new activities</li> <li>• Increasing de-centralisation – people involved in more activities /networking</li> <li>• Direct contact with customers, more proactive to final market</li> <li>• High internal rotation</li> <li>• Products strongly linked to customers evolving needs (emergence strategy)</li> </ul>

In order to achieve its mission, at the same time of its conception, M3's management team launched a program, based on the idea of the Balanced Scorecard that was called M3 Strategy Map. The key Strategic Themes for the success of M3 in the first two years included building overseas market presence, growing local presence, developing the right product, building the ability to deliver solution, accelerating speed to market and treating people as strategic assets. Each of these Strategic Themes had an associated operation plan, containing goals in the four perspectives of the Balanced Scorecard (Financial Perspective, Customer Perspective, Internal Process Perspective and Learning and Growth Perspective). These eight plans were the main pillars in the Strategy Map of M3. Several enabler themes were incorporated in the strategy plan such as *“empowerment and trust prevails over command and control”*, *“Everybody is a Shareholder”* with full rights to play the role of the Shareholder regardless of the quantity of stock owned and *“Fulfilment of personal goals such as to allow people to build competencies that support their personal goals, respect people's personal and family time.”*

Figure 6-5 presents M3's projection on the Management Role Matrix. The perception of strategy formation was collected in 2003. At that time, Management role endured a blend of proactive and reactive orientation. The strategy formation process consisted of a blend of intended and emergent strategy. M3's position is unique and falls between all quadrants. Management is reactive to its customer and general market trends on the one hand while trying to implement a long-term plan and set an enabling environment on the other.



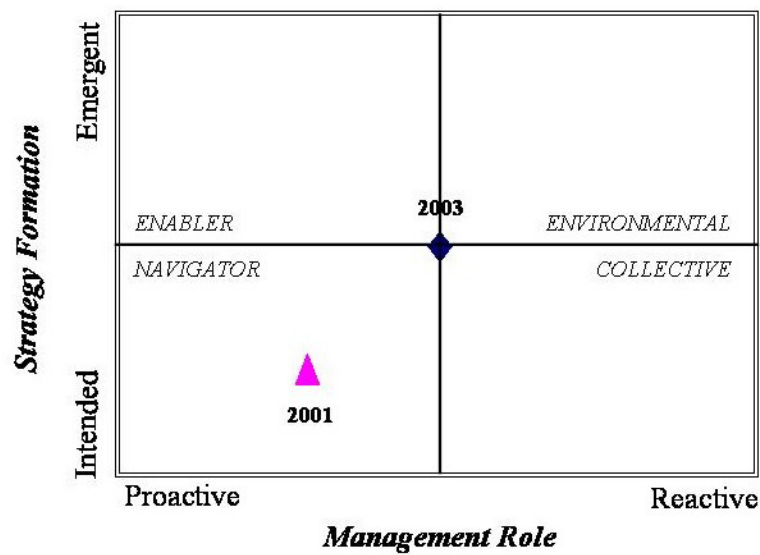


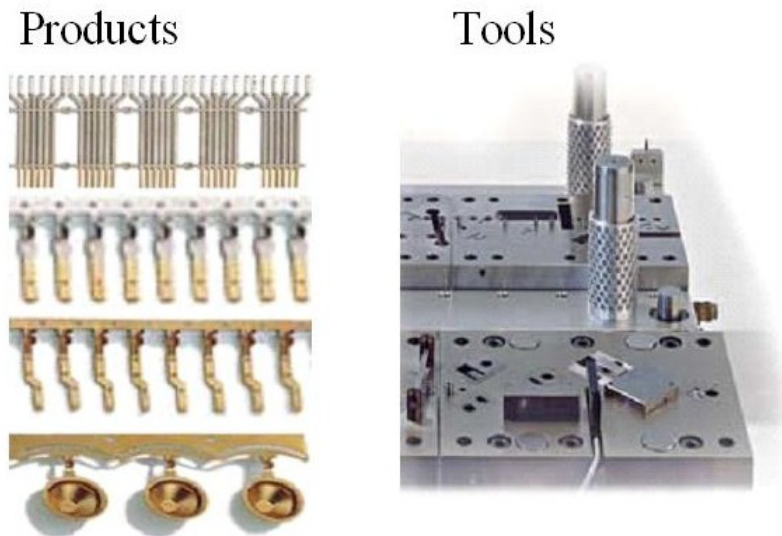
Figure 6-5: M3 perceived projection on the Strategy Formation Matrix

The perceived projection of M3's strategy formation processes in 2001 (recorded in 2003) is different from its 2003 position. Management is perceived as more proactive. The strategy formation process is characterised as predominantly intended, positioned in the Navigator quadrant of the Strategy formation Matrix.

## 6.6 High Precision Parts Manufacture (S3) – Case study

### 6.6.1 Background

For over 25 years, S3 has been a partner for the design, tooling manufacture and high volume production of punching and bending parts in various sizes, as well as for the production and delivery of plastic moulded and plastic assembled metal components. The parts and components developed by S3 and its customers are deployed in various industry sectors such as: automotive industry, metrology and control technique industry, electrical and electronics industry, communication industry, medical industry, aeronautical industry and optical industry. S3's core products can be described as small parts mostly made of non-iron metal, which are manufactured at high volume (up to 600 per minute) and high precision (tolerance scale is often in microns). S3 does not only manufacture those products but also provides the necessary tooling for them. Tooling is increasingly made out of aluminium.



**Figure 6-6: S3 products**

The customer co-operation starts during the development phase of new products and continues through to prototyping and high volume manufacture of the products. A very important service S3 delivers to the customer is the detailed development of the part itself. A typical customer request starts with a function scheme and then, together with the customer, the part is finally shaped and is geometrically frozen. This constellation is considered a key competitive advantage since after having been involved in such a joint development process the entrance barrier or knowledge gap for competitors (who want to manufacture the part at high volume) is often too high.

The market for this type of product is extremely large. Each automotive OEM and all the big first-tier suppliers are potential customers. S3 is an extremely small player in this market. There are very stable customer-supplier relationships and for newcomers it is extremely difficult to enter this market. S3 makes around 40% turnover from overseas business. Emerging markets are the Eastern European Countries and South East Asia. USA is still regarded as a difficult market since the automotive industry has not entirely recovered from the events of September 11, 2001 yet. S3 is family oriented and its structure is Matrix based. It has three SBUs (Tooling, Bending Manufacture and Punching Manufacture) and cross company functions such as development, sales, purchasing, quality and logistics. The company has managed to grow in a very sound, sustainable and organic way in the last three decades. The management workshop conducted in S3 revealed the perceived image of the company (March 2003) as a small and flexible organisation, competent at finding solutions (many customers do not come to S3 with a clear idea about the parts to be produced but only rough guidelines), customer and service oriented, with a strong corporate culture.

### **6.6.2 Vision and Strategic Challenges**

The vision (August 2002) of S3 was to be a world-class manufacturer of high precision metal parts. The marketplace was witnessing an increasing trend of plastic parts replacing non-iron metal parts. Since S3 is an expert in high precision metal pieces the

main dilemma was whether S3 should enter new markets where the value of high precision metal pieces is recognised (for example medical market or aeronautics).

In a later period (February 2003) other strategic challenges were recognised. The main risk was that the company strongly relied on one main customer and one main executive figure, which was the founder and acting CEO. The company needed to explore new business opportunities to reduce the dependency on one main customer, but only had limited resources to do this. They also needed to improve knowledge management processes so as to reduce the dependency on the CEO. Management decided to increase robustness by three areas of activities: building sales, managing and distributing knowledge and finding new partners.

### 6.6.3 Strategy Formation Process

S3 has retained some of its family owned management orientation. Some special characteristics of this mentality are a very informal relationship between the employees and also with the management. This is also shown by the employees' willingness to work overtime even at the weekend and at very short notice. The family feeling is also encouraged by a company vacation trip twice a year. These vacations are generally planned and organised by the employees themselves. S3 employees endure high loyalty evident in the fact that fluctuation of the key-personal was close to zero in the last two years.

Table 6-6 represents examples of the perceived blend of intended and enabler activities taken by management (February 2003). Intended activities were defined as proactive initiatives taken by management in an intended strategy formation process. Enabler activities were defined as proactive initiatives taken by management to support an emergent strategy formation process.

**Table 6-6: S3 examples of Intended and Enabler Management activities**

Intended Activities	Enabler Activities
<ul style="list-style-type: none"> <li>• Setting internal quality standards</li> <li>• Strategic investments</li> <li>• Old economy – hierarchy – family business</li> <li>• Next year better than last year (profit)</li> <li>• Networking with suppliers</li> <li>• Common patents with customers (process/technology)</li> <li>• Strengthening competence image</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration for new markets, networks and process</li> <li>• Involve people in new activities</li> <li>• Direct contact with customers</li> <li>• Adaptive to customer demand</li> </ul>

S3 is dominated by a hierarchical structure and the limits are clear and accepted in the majority of cases. Most employees are specialists with long experience. Ideas for improvements mainly come from the management side, due to the very hierarchical culture. In the past, this has resulted in employees not feeling responsible enough to give ideas for improvements.

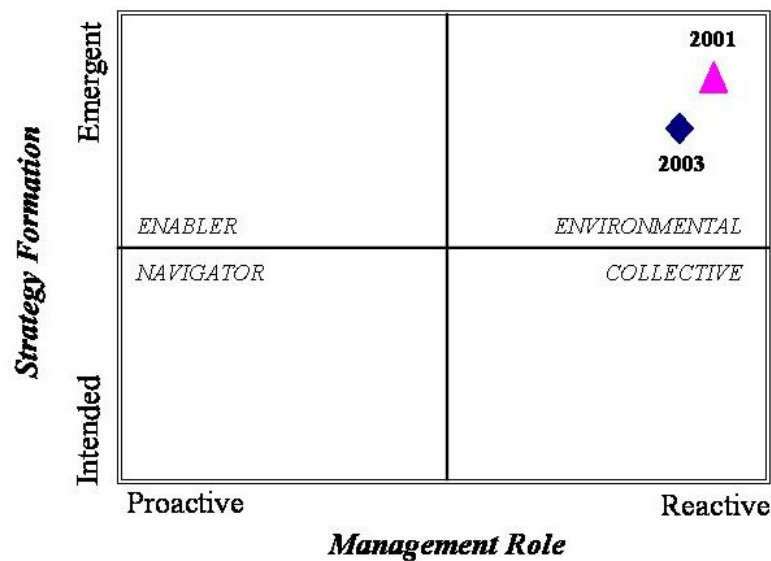


Figure 6-7: S3 perceived projection on the Strategy Formation Matrix

S3 works closely with its main customers, and adapts itself in terms of new products, technology and investments to their evolving needs. The company customer relations are based on individual's relationships. In a management workshop (April 2003), the desired future identity and position consisted of: high quality standards, building brand name, growing network, increasing proactive role in the market, building competence to solutions, enduring diversified corporate culture and investing in specialists with flexible roles.

Figure 6-7 presents S3's projection on the Management Role Matrix. The perception of strategy formation was collected in 2003. At that time, S3 endured a rather reactive strategy formation process, mainly to its customer's emerging needs. S3 perceived position was in the Environmental quadrant. The perceived projection of S3's strategy formation processes in 2001 (recorded in 2003) differs only slightly from its 2003 position. Management is perceived as a bit more reactive and the strategy formation is perceived as more emergent. The position is located in the Environmental quadrant of the strategy formation matrix.

## 6.7 Biotechnology Company (S5) – Case study

### 6.7.1 Background

S5 started as a spin-off from a University a decade ago. The launch of a commercial product, initially developed at the University, allowed rapid set up production of customised micro-fluidic systems for a large customer. Using the momentum created by these customised products, the company initiated a wide market analysis. This resulted in the definition and development of a generic product range using proprietary developments and technology strongholds. The first activities of the company concentrated on the development and the manufacturing of micro-fluidic subsystems for a number of customers. Having set up a network of sub-contractors, the company focused on Research and Development (R&D) for new products or technologies,

product adaptation/integration on customer platforms, system final assembly and quality assurance. The company's growth relies on building partnerships with worldwide renowned instrument manufacturers. The position of S5 in the supply chain is usually several positions before the end-user. S5's customers propose and deliver complete instruments to the pharmaceutical industry. The company's core product is a sensor controlled micro-liquid handling system. Its main market is automated laboratory equipment to research and develop new drugs.

### 6.7.2 Vision and Strategic Challenges

In August 2002, a company manager described S5 vision the following way: *"Because of the versatile nature of S5 technology, the vision is to diversify into other areas such as the manufacturing of specialised products, hoping that S5's products will be widely used throughout pharmaceutical research laboratories in the world"*. The strategic challenges collected in August 2002, focused on orientating future product development and internal capabilities around the capture of relevant information from new technologies and the market environment. Since the company forecasts that their products will be widely used throughout pharmaceutical research laboratories in the world, it is keen to leverage its future customer base and diversify into other areas such as the manufacturing of specialised products. The strategic challenges identified in February 2003 reflected a shift in management attention. Management was mainly focused on overcoming short-term fluctuations in customer demand and reallocations of resources.

### 6.7.3 Strategy Formation Process

Table 6-7 represents examples of the perceived blend of intended and enabler activities taken by management (April 2003). Intended activities were defined as proactive initiatives taken by management in an intended strategy formation process. Enabler activities were defined as proactive initiatives taken by management to support an emergent strategy formation process.

**Table 6-7: S5 examples of Intended and Enabler management activities**

Intended Activities	Enabler Activities
<ul style="list-style-type: none"> <li>• Setting up production systems, Quality systems</li> <li>• Structuring organisation</li> <li>• Maintain / reinforce partnerships</li> <li>• Build new partnerships</li> <li>• Customise products</li> </ul>	<ul style="list-style-type: none"> <li>• Internal R&amp;D</li> <li>• Technical presentations / publications</li> </ul>

S5 has a small number of employees; most of them have been with the company since its launch. Informal relations, coffee corner chats and individual actions play a major role in the company's actual realised strategy. Business development is perceived as a major task. S5 collects inputs from a variety of sources in order to define short, mid and long-term products, developments or advanced research. Typical inputs come from

discussion with customers and end-users, inputs from the Scientific Advisory Board and participation in conferences. The inputs are evaluated against existing capabilities, the potential business relevance and associated risks, as well as possible sources of funding in case of development or research when required. In specific cases, an external analyst outsourced market analysis. S5's main concern is how to move from engineering to manufacturing in an efficient way (previously manufacturing was outsourced). This requires an intended plan and implementation.

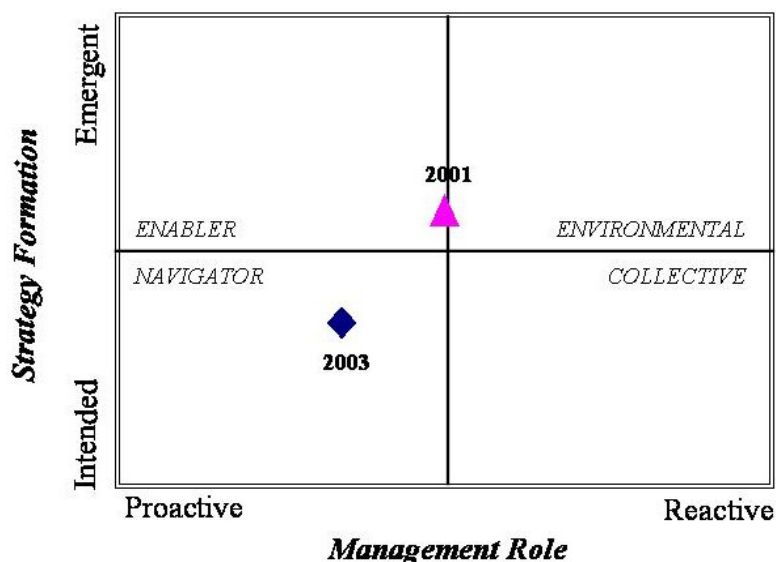


Figure 6-8: S5 perceived projection on the Strategy Formation Matrix

Figure 6-8 presents S5's projection on the Management Role Matrix (February 2003). S5's management is rather proactive, incorporating a blend of intended and emergent strategy formation process where the intended aspect is more dominant. The company is positioned in the Navigator quadrant. The position corresponds to management focus on building efficient production and distribution functions. The perceived projection of S5 strategy formation processes in 2001 (recorded in 2003) is different from its 2003 position. Management is perceived as less proactive. The strategy formation process is characterised as mainly emergent, positioned between the Enabler and Environmental quadrants of the Strategy Formation Matrix.

## 6.8 Research Limitations and Strengths

Several limitations and strengths can be identified to the presented multiple-case study approach. One of the main strengths is that the sample of companies represents a diversity of companies in terms of size and industry. This contributes unique insights concerning strategy formation process. For example, while S3 and L7 are both concerned with finding investment criteria, S3 is also concerned about how to overcome some aspects of the family oriented company culture. And L7 is concerned with trying to please various stakeholders such as stock owners. An additional strength was the author's accessibility to the companies allowing frequent contact with the companies over the research period for the purposes of gathering additional data, validating data interpretations and for general research inquiries.

While most of the data collection relied on several participants in each company as a source, the projection to the Strategy Formation Matrix relied on one or two managers from each of the researched companies. Managers seemed to understand the Strategy Formation Matrix and found it easy to relate and project their perceived company position. However, a research weakness is that the projection represents the managers' personal perceptions. These perceptions are based on individual assumptions, expectations, knowledge and information about the world of other people and relationships with them, as well as about the non-human world in which the individual lives and acts (Stacey, 2001). Strategies emerge as perspectives in the form of concepts, maps, schema, and frames that shape how people deal with inputs from the environment. Mintzberg *et. al.* (1998) claim that these inputs, according to the subjective wing of the Cognitive School, are merely interpretations of a world that exists only in terms of how it is perceived. Some of the values and beliefs of the individual may be shared with others and some of them may be unique to the individual (Stacey, 2001). However, the researcher tried to overcome this limitation by collecting data from a number of sources such as surveys, workshops, interviews, documentation and external sources which enabled the generation of background information on the company and its market in general and description of strategy formation process in specific, thus validating the managers' perceptions. Each company case study within the multiple-case studies allowed triangulation of sources against the cases where the projection was done based on one manager's perspective.

Managers were also asked to reflect the earlier time position, in most cases two years, on the Strategy Formation Matrix. This reflection on their past performance was not based on data, but mainly memory and perception. Triangulation with other sources of data in most cases was low since the data collected reflected mainly the research period. However several cases show a substantial shift in the company projection on the Strategy Formation Matrix. Although the position might not be completely accurate, it is believed that those movements represent a true change in the strategy formation process and management role. The form and path of movement from one point in the Strategy Formation Matrix to another could in many ways generate major research implications; however no substantial data was collected on this movement.

Another limitation can be found in the fact that the projection on the Strategy Formation Matrix represents a snapshot in time and not a longitudinal study. Although several shifts in the strategy emphasis were reported within the course of research and each case offers one additional pre-research era projection point on the Strategy Formation Matrix, the research is still lacking a broader data collection time-line representing the company's long-term evolution.

## 6.9 Summary

The multiple-case study described six companies including information on their background, strategy and strategy formation process. The sample was diversified in terms of size, industry and location. The perceived company projection on the Strategy Formation Matrix varied between the Navigator, Enabler, Environmental and Collective quadrants. No direct link was found between the company size and its position on the Strategy Formation Matrix.

In the previous Chapter the theory behind the Strategy Formation Matrix was validated theoretically by investigating the projection of various strategy schools of thoughts. The multiple-case study contributed to validating the matrix by real-world examples. Managers testified that the matrix was easily understood and reflected real life situation of a blend of intended and emergent strategy formation processes as well as management role that was characterised with proactive and reactive involvement. Additional data collection contributed to understanding the type of strategy formation activities and the company background for validating the perceived projection.

Companies engage in different strategies and different strategy formation processes at different time periods. Mintzberg *et al.* (1998) explain when describing the Configuration School that *“most of the time, an organization can be described in terms of some kind of stable configuration of its characteristics... for a distinguishable period of time, it adopts a particular form of structure matched to a particular type of context which causes it to engage in particular behaviours that give rise to a particular set of strategies... These periods of stability are interrupted occasionally by some process of transformation—a quantum leap to another configuration”* (pg 305). The multiple case study reflected how strategy and strategy formation processes changed between different points of time in all of the companies.

Although it appears that different companies, and the same company in different times, endure different positions on the matrix the context and reason for their position is not clear. The companies' business environment investigation suggests it differed between companies and within companies along time. De Geus (1997) claims continuous, fundamental changes in the external world – a turbulent business environment – require continuous management for change in the company. The derived uncertainty from turbulence also effects in the decision making process. Although the business environment is different for each company, and this may effect its position on the matrix, no clear relation to the link between business environment and strategy formation process was presented. Chapter seven investigates this link by extending the Strategy Formation Matrix Model to incorporate the business environment and researches it using a sample of seventeen companies.

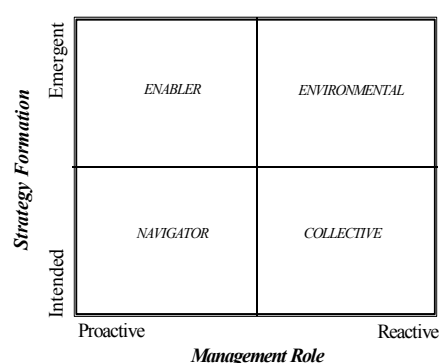


# 7 Business Environment and Strategy Formation

*This Chapter aims to investigate the Strategy Formation Matrix in relation to the business environment. It presents the Business Environment Matrix, and investigates the position of the 17 researched companies in relation to the two Matrices. The Chapter outlines these investigations based on companies' projection by quadrant and companies' projection by size. The Chapter concludes by outlining the limitations and strengths of the research methods.*

## 7.1 Introduction

The theoretical investigation (Chapter 5) of the Strategy Formation Matrix (Figure 7-1) reflected the various strategy schools and their projection in relation to the different Quadrants of the Matrix. Chapter 6 presented a multiple-case study of companies, validating the existence of strategy formation as a blend of emergent and intended strategy and its relation to management role in six diversified companies. Furthermore the investigation showed companies were aware of strategy formation process changes over time.



**Figure 7-1: Developed Strategy Formation Matrix**

In this Chapter a further analysis will be conducted to investigate how the business environment is related to the companies' perceived strategy formation process.

De Geus (1997) claims that continuous, fundamental changes in the external world – a turbulent business environment – require continuous management of change in the company. Courtney *et al.* (1997) states that the derived uncertainty from turbulence also effects, in various ways, the decision making process and strategy formation process. Weick and Sutcliffe (2001) claims that to be able to meet unexpected and new situations, organisations need to be loosely coupled, self-designing systems. Some of the characteristics needed for such systems include, for example continuous experimenting rather than searching for final solutions, valuing improvisation more than forecasts, inventing solutions rather than borrowing them, and encouraging doubts rather than removing them (Stacey, 2000).

Many managers and analysts argue that over the last two decades the environments they face have become more turbulent. As a result, there has been recognition of an overwhelming increase in uncertainty concerning many decision-making processes. Courtney *et al.* (1997) claim making systematically sound strategic decisions under uncertainty requires a different approach. Buchner *et al.*'s (1998) turbulence model was used to extend the Strategy Formation Matrix model as a way of taking into account the organisation's business environment. In the suggested model turbulence is represented as the result of two main influences – complexity and dynamics, where:

- Dynamics – is defined as the frequency of change in the factors in decisive business areas, the degree of radicalism these changes exhibit and the regularity of their occurrence.
- Complexity – is defined as the number of external factors that have to be considered during the decision making process, the disparity of these factors and their distribution across the various business areas.

The two dimensions are illustrated in Figure 7-2 as a matrix. The author decided to call this model the Business Environment Matrix simplifying Buchner *et al.*'s (1998) turbulence portfolio model. Four quadrants were generated within the matrix these are; Dynamic, Static, Complex and Turbulent. The Dynamic quadrant represents medium to high dynamics and low to medium complexity. The Static quadrant represents low to medium dynamics and low to medium complexity. The Complex quadrant represents low to medium dynamics and medium to high complexity. The Turbulent quadrant represents medium to high dynamics and medium to high complexity. Therefore, high dynamics or high complexity alone does not define turbulence.

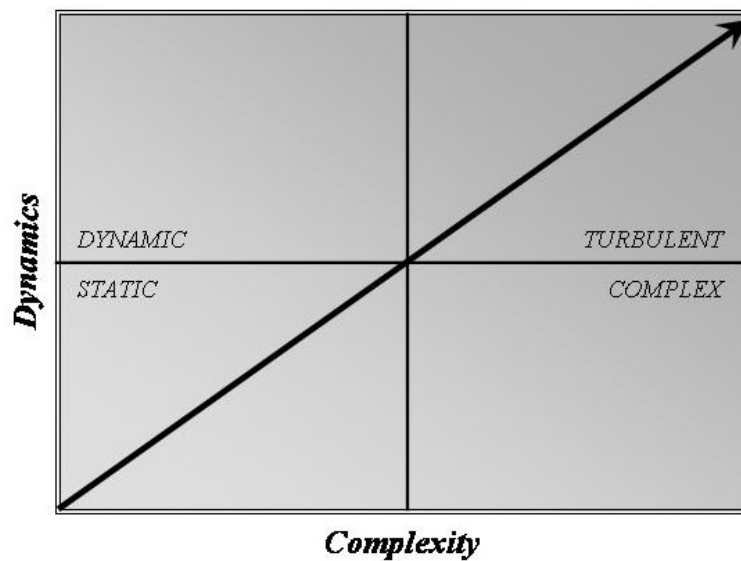


Figure 7-2: The Business Environment Matrix (based on Buchner *et al.*, 1998)

Buchner and Weigand (2001) link uncertainty to the turbulence portfolio (based on Courtney *et al.*, 's (1997) definition) in the following manner:

- Low complexity and low dynamic situations are characterised by a very low level of uncertainty (level 1 situation: a clear enough future).
- High complexity and medium dynamic situations are characterised by a low level of uncertainty (level 2 situation: alternative futures).
- Low complexity and high dynamic situations have a high degree of uncertainty (level 3: a range of futures).
- High complexity and high dynamic situations (turbulent situations) are marked by a very high level of uncertainty (level 4: true ambiguity).

Data collection began in June 2002 and ended in February 2004, consisting of multiple sources of data collection such as workshops, interviews, surveys, internal documents and external documents (such as newspapers and the Internet). Data collection included an initial background survey (Appendix C), Management role Environment Networking (MENI) Analysis (Appendix D and E), Strategy formation process workshop analysis (Appendix F), context analysis workshop (Appendix G) and an industry structure analysis (Appendix H). Along the course of the research several discussions were held with managers from the companies for clarification and sense making. 17 companies participated, varying from small to large in size, operating in 12 different industries, and based in 8 countries.

The company projection was investigated based on the position in the Business Environment Matrix quadrants (Dynamic, Static, Complex and Turbulent) and based on size.

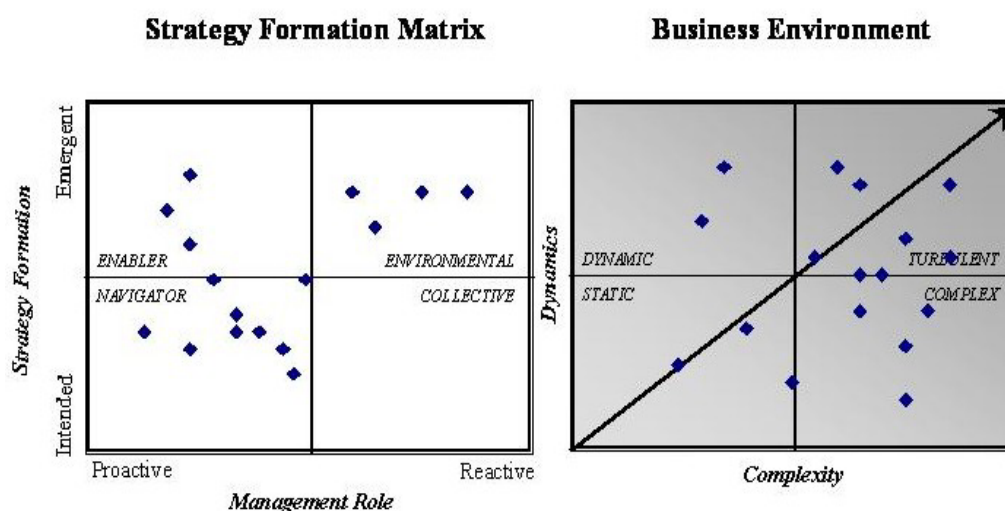


Figure 7-3: Projection of the 17 researched companies

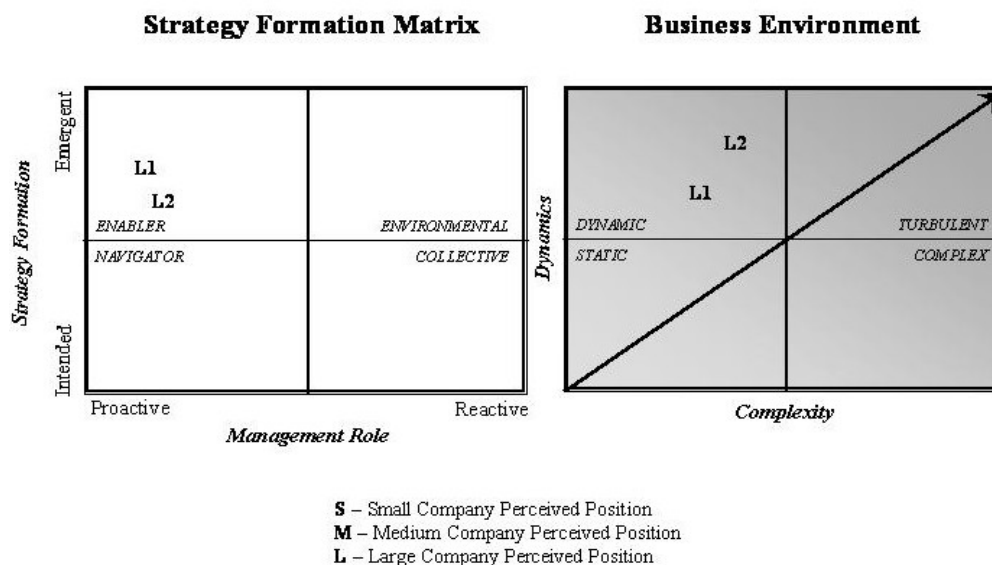
Figure 7-3 presents the projection of the 17 researched companies on the Strategy Formation Matrix (left) and the projection on the Business Environment matrix (right). As can be observed little can be implied without additional analysis.

## 7.2 Companies Projection by Quadrant

This section describes the researched companies' background and their perceived projection on the Strategy Formation Matrix and Business Environment Matrix. The companies are presented in four subsections categorised based on their position on one of the Business Environment quadrants (Dynamic, Static, Complex and Turbulent).

### 7.2.1 Dynamic Quadrant

Two companies from a sample of seventeen, perceived themselves to be in the Dynamic quadrant of the Business Environment Matrix (Figure 7-4). The Dynamic quadrant characterises the business environment of the companies as being relatively high in dynamics and low / medium complexity. Both of the companies, L1 and L2, are large and perceive their management to play a proactive role in a rather emergent strategy formation process, positioned in the Strategy Formation Matrix's Enabler Quadrant.



**Figure 7-4: Analysis of companies operating in Dynamic quadrant**

L1 is a leading European telecommunications services provider. Its principal activities include local, national and international telecommunications services, higher-value broadband, Internet services, and IT solutions. L1's environment is influenced by high dynamics, driven by technology and frequent changes in regulations, as well as lack of market clarity. Complexity is growing in terms of number of contacts, variety of products and co-opetition<sup>1</sup> relations with competitors. L1 perceived its position, in the Management Role Matrix, in the Enabler quadrant (Figure 7-4). The company strategy formation in the past was mainly intended, where efficiency was a main theme. However, in recent years the strategy formation is perceived to be more emergent, in order to confront the business environment in a positive way. Enabler activities, for strategy emergence, are perceived to be increasing awareness and anticipation of the future by exploration, diversification and enhanced internal communication.

L2 is one of the world's leading research-based pharmaceutical and healthcare companies. The company perceives its position as very dynamic due to various changes in demands and substantial competition in the 38 countries it operates in. Although L2 has a large number of products and confronts various regulations, the complexity level is still perceived to be low to medium. L2's perceived position, in the Management Role Matrix, is in the Enabler quadrant (Figure 7-4). Management role in strategy formation is proactive in setting vision and guidelines but mainly as an Enabler. A regional manager in charge of Germany and East Europe referred to the manager's role as a coach and that "*asking what the situation is, reflecting and helping*" are important characteristics. He claims that in order to operate in a dynamic environment quick reactions are essential and it would take top managers too long to understand the situation fully. Therefore, empowering middle managers to make their own decisions is essential.

<sup>1</sup> Co-opetition – based on Brandenburg and Nalebuff's (1996) theory relating to a combination of competition and cooperation

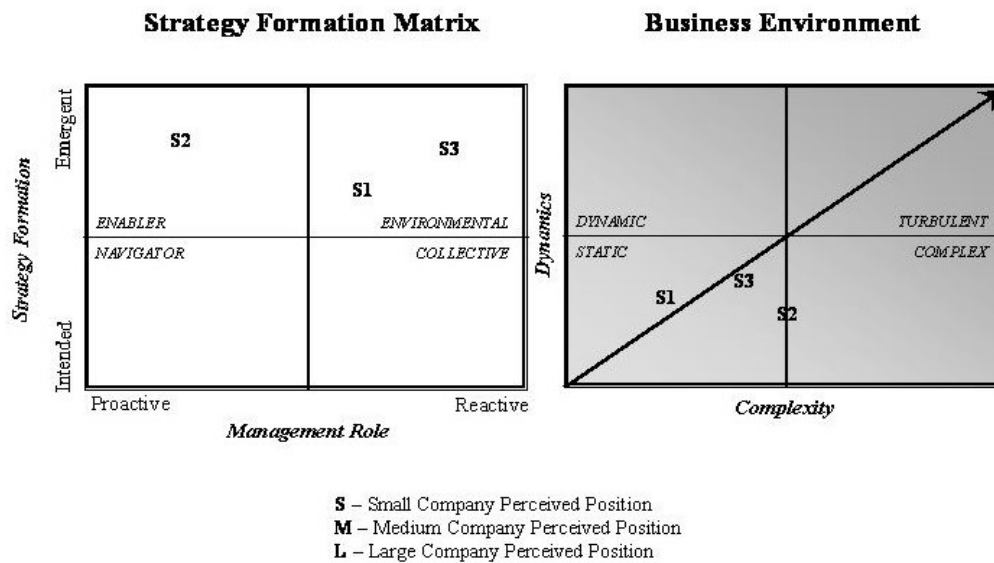
Based on the above the following observation is made (Figure 7-4):

**Observation 1:** Companies perceived to be operating in the Dynamic quadrant of the Business Environment Matrix tend to be large and are positioned in the Enabler quadrant of the Strategy Formation Matrix. They perceive themselves to have an emergent oriented strategy formation process with management playing a pro-active role.

### **7.2.2 *Static Quadrant***

Three companies, from a sample of seventeen, perceived themselves to be in the Static quadrant of the Business Environment Matrix (Figure 7-5). The Static quadrant characterises the business environment of the companies as being low / medium in dynamics and low / medium complexity. Interestingly all of the companies, S1, S2 and S3, are small and perceive themselves as having a rather emergent strategy formation process, positioned in the Strategy Formation Matrix's Enabler and Environmental Quadrant. S2's management is perceived as proactive, while S1 and S3's are perceived as reactive to the strategy formation process.

S1 is a new product introduction (NPI) service supplier, offering a variety of technology services to hi-tech companies (for example design of Printed Circuit Boards, Compliance laboratories, and Quality). Over 80% of S1's income is generated from two major customers. S1's business environment is perceived as static, since it acts as an almost single supplier to its major customers in essential parts of new product development. Although there are some business fluctuations, derived from the customer's turbulent environment, most of them have a year's delay and therefore are relatively easy to foresee. Complexity is derived from the expertise needed in several standards and in a number of different services offered but is still regarded as relatively low. S1's perceived position in the Strategy Formation Matrix is in the Environmental quadrant (Figure 7-5). Management role is perceived as reactive to its main customers evolving needs. The strategy formation process is relatively more emergent than intended. This characteristic is caused by the organisations rather flat hierarchy of experts, in different fields, self-organising to meet the changing customer needs.



**Figure 7-5: Analysis of companies operating in Static quadrant**

S2 is a very small consulting firm specialising in a specific niche of psycho-strategic consulting for individuals, teams and organisations. S2 benefits from long-term relationships with its customers and operates in a rather stable business environment. However, S2 is engaged in various professional and business relationships with universities, consulting enterprises and some partnerships at the national and international level, which results in a medium level of complexity, due to the structure and number of these interfaces. S2's perceived position in the Strategy Formation Matrix is in the Enabler quadrant (Figure 7-5). S2 tries to maintain its competence by investing in research and retaining its flexible and innovative characteristic. Close relationships with customers enhance the emergence of services and tools when confronted with new or changing needs. Management is perceived as proactive by trying to create long-term competitive advantage and by being selective in customer requests, which are away from the main line of business.

S3 is a small high precision parts manufacturer (analysed in the multiple-case study section 6.6). S3 is a family oriented developer and manufacturer of punching and bending parts. S3's substantial portion of sales has been based on serving, for over twenty years, a big automotive first-tier supplier. Although S2 is an extremely small player in a worldwide market, the business environment can be categorised as Static since it is dominated by a long-term relationship, serving as a barrier for possible new entrants. S3's perceived position in the Strategy Formation Matrix is in the Environmental quadrant (Figure 7-5). S3 business evolution is closely correlated to its major customer, explaining the nature of its re-active and emergent strategy formation process.

Based on the above the following observation is made (Figure 7-5):

- **Observation 2:** Companies perceived to be operating in the Static quadrant of the Business Environment Matrix tend to be small and endure an emergent strategy formation process (upper half of the Strategy Formation Matrix).

### 7.2.3 Complex Quadrant

Four companies, from a sample of seventeen, perceived themselves to be in the Complex quadrant of the Business Environment Matrix (Figure 7-6). The Complex quadrant characterises the business environment of the companies as enduring relative high complexity and low / medium dynamics. The four companies range in size consisting of one large sized company (L3), one medium sized company (M1) and two small companies (S4 and S5). All of the companies perceive themselves as having proactive management in an intended strategy formation process, positioned in the Strategy Formation Matrix's Navigator quadrant. Three of the companies positioned in the Complex quadrant are technology oriented (S5, L3 and S4).

S5 is a biotechnology company specialising in niche micro fluidic controllers (analysed in the multiple-case study section 6.7). Since marketing is via partnering with large customers and suppliers to the pharmaceutical industry, the dynamics is low; however complexity regarding technology, regulation and specific needs is high. S3's perceived position in the Strategy Formation Matrix is in the Navigator quadrant (Figure 7-6). S5's main concern is how to move from engineering to manufacturing in an efficient way (previously manufacturing was outsourced). This requires an intended plan and implementation. Some of the management activities include setting up production and quality systems, maintaining and reinforcing partnerships, building new partnerships and customizing products. Enabler activities include acquiring new ideas by participating in various conferences as well as encouraging Research and Development ideas and innovations.

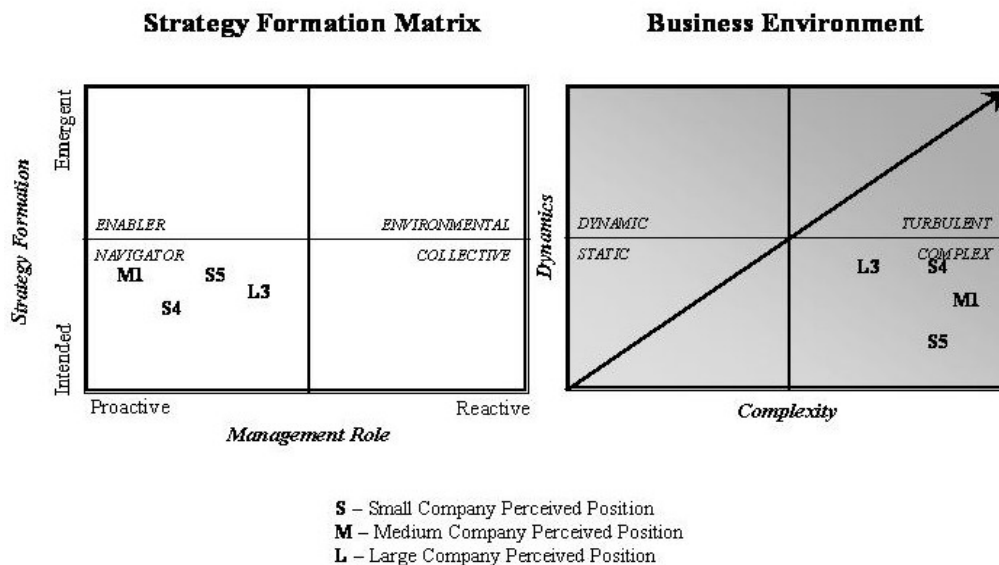


Figure 7-6: Analysis of companies operating in the Complex quadrant

L3 is a state Aerospace Research Centre assigned by the Government to define and pursue the National Aerospace Research Program, which collects the needs expressed by the industrial and research arena. This involves taking into account the perspectives in the field of aviations and space on a world-wide scale. Due to the long-term characteristics, funding system and stakeholders' involvement, the environment is



mainly complex and less dynamic. L3's perceived position in the Strategy Formation Matrix is in the Navigator quadrant (Figure 7-6). Management is described as pro-active in terms of scientific and organisational contributions; however it is not completely independent, due to various government and public stakeholders. Strategy is derived mainly from long-term plans.

S4 is a regional competence and innovation centre for fuel-cell technology that aims at maintaining the region's existing advantage in this technology by combining and networking knowledge of development and application from different sources (vehicle construction, energy production and consumer electronics). The environment is mainly complex due to the different consumer niche, the need of technology integration, legislation and patents. S3's perceived position on the Strategy Formation Matrix is in the Navigator quadrant (Figure 7-6). S4's strategy is to assist in co-ordination and promotion of market penetration for disruptive innovation technology. The scope of strategy planning is several years in advance, therefore the strategy formation process is pro active and intended.

A non-technology example is, M1, a middle sized insurance and financial company specialising in a unique niche. M1 was formed as a mainly specific professional association. The complex environment is due to culture and geography (obliged to support different regions with three national languages) and complexity of social insurance system due to heavy regulation. Various legislation activities could increase the dynamics of the market. M1's perceived position in the Strategy Formation Matrix is in the Navigator quadrant (Figure 7-6). Management role is perceived as proactive in implementing a focused strategy of quality and efficiency improvements as well as a gradual increase in the portfolio of offered services.

Based on the above the following observation is made (Figure 7-6):

- **Observation 3:** Companies perceived to be operating in the Complex quadrant of the Business Environment Matrix are positioned in the Navigator quadrant of the Strategy Formation Matrix and are primarily highly specialised companies. They are perceived to have a pro-active management role in an intended strategy formation process.

#### 7.2.4 *Turbulent Quadrant*

Eight companies from a sample of seventeen, perceived their business environment as turbulent (Figure 7-7). The Turbulent quadrant characterises the business environment of the companies as enduring relative high complexity as well as high dynamics. The eight companies range in size consisting of four large sized companies (L4, L5, L6 and L7), two medium sized companies (M3 and M2) and two small companies (S6 and S7). The four large companies (L4, L5, L6 and L7) are positioned in the Navigator quadrant of the strategy Formation Matrix. Their management is believed to be proactive in an intended oriented strategy formation process. The medium size companies (M3 and M2) incorporate a blend of emergent and intended strategy formation process. M2's management role is rather proactive while M3's management incorporates a blend of proactive and intended roles in the strategy formation process. The two small

companies (S6 and S7) are both perceived to be positioned in the Environmental quadrant of the strategy formation process, where management is reactive in an emergent strategy formation process. It can be observed that the companies are positioned by size (small, medium, large) in a diagonal way from the upper right of the Strategy Formation Matrix to the bottom left. In general, the larger the company size the greater the tendency is to have a more proactive management role with a more intended strategy formation process.

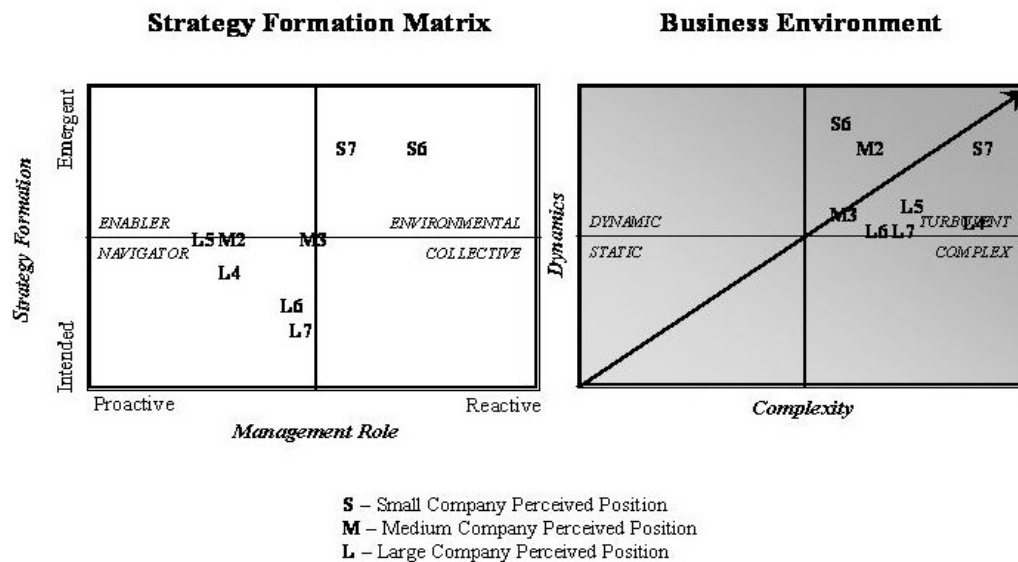


Figure 7-7: Analysis of companies operating in Turbulent quadrant

Four of the companies positioned in the turbulence quadrant are large (L4, L5, L6 and L7). L4 is one of the world's largest manufacturers of site dumper trucks, forklift and concrete trucks. Its market includes over 60 countries with subsidiary companies in Europe, China and USA. The company's strategy led it from an expensive car industry, over four decades ago, to specialise in a niche of small dumpers trucks. Analysis of the company reveals a business environment with low dynamics and high complexity. While the high complexity can be explained by the unique needs of various segments, the lower dynamics is explained due to two balancing economic cycles. The company has observed, over the years, that every time the home construction market decreases, the civil construction market starts to increase. The company perceives future socio-demographic effects on market dynamic, which will result in increased turbulence. L4's perceived position on the Strategy Formation Matrix is in the Navigator quadrant (Figure 7-7). The company's management is increasing its proactive role in strategy formation in a blend of intended process (for example forecasting, external experts, clients needs) and emergent process (for example cross functional teams, reduced centralised family owned culture and rules, scanning new business areas). Anticipation for change is regarded as a fundamental company success factor for robustness, as one manager stated: *"every person, from the directors to the ordinary workers, focus very strongly on being constantly prepared for anything that may happen"*.

L5 is a multinational leader in the conception and manufacture of interior automotive components and modular systems (analysed in the multiple-case study section 6.2).

L5's business environment is complex due to the introduction of new technology demanding specialisation in various materials as well as electronics. Complexity is also owed to a large diversity of products, customisation, and high safety regulations. L5's perceived position in the Strategy Formation Matrix is in the Navigator quadrant (Figure 7-7). L5 has a balanced blend between intended and emergent strategy process. The company has witnessed extensive growth in the previous years and is focused on the one hand on introducing quality and efficiency improvements, while increasing innovation on the other. The company's management is using the Balance Scorecard method as a means of strategy implementation.

L6 is a telecom vendor that provides advanced telecommunications solutions to leading carriers and service providers, worldwide. L6 is also referred to as HiCo in the action research (Chapter four) where further information is offered. The company's business environment was perceived as turbulent due to frequent fluctuations in market demand, entry of new competitors as well as the exit of others. The technological roadmap of the market was also unclear concerning direction and pace of change. L6's perceived position in the Strategy Formation Matrix was in the Navigator quadrant (Figure 7-7). L6 witnessed a high turbulence era, which resulted in a decline in sales, decrease in profit margins, resulting in major cash flow problems. To survive as a business, management had to take harsh intended measures (for example closing activities, focusing on its core business and generally cutting costs). However, since some reduction in turbulence is forecasted for the near future (for the market in general and L6 in particular), the CEO plans to increase emergent strategy in order to leverage new opportunities needed for its long-term sustainability.

L7 is a global financial services company operating mainly in Europe and the U.S.A (analysed in the multiple-case study section 6.3). The company witnessed several years of fast growth in the past but recently encountered turbulence and cash flow problems, generated from increased dynamics. The complexity of the environment is due to the portfolio of products and the unique local regulation and legislation concerning insurance pensions, savings etc. L7 has implemented a pro-active emergent strategy in the previous half decade (for example large investments in Knowledge Management, self organisation and innovation). However, due to the financial problems the company has encountered, the company intends to retain a high pro-active management role while also transforming it to be more intended (central control, focus on core activities, and a closure of unprofitable activities).

Two of the companies positioned in the Turbulent quadrant are medium sized (M2 and M3). M2 is a consulting firm operating in several European countries offering new product development advice from the concept definition phase to cost optimisations (analysed in the multiple-case study section 6.4). The firm is exposed to business cycles, technology changes, and frequent shifts of workload between customers, which causes high dynamics. Complexity is structured in the diversity of skills and knowledge needed to support customers from all types of industries. M2's perceived position in the Strategy Formation Matrix is between the Navigator quadrant and the Enabler quadrant (Figure 7-7). Until now the firm has been faster in operating and acting in advance of the competitors in identifying customer's future needs, as seen in its proactive position in the Strategy Formation Matrix. However, due to growing competition, management would like to increase its proactive role in the future and search for new business

models. The strategy formation process is both intended (i.e. concrete financial goals and milestones per project) and emergent (enabling creativity and new business ideas generation).

M3 is a global software vendor deploying a market strategy based on alliances with consultants and system integrators (analysed in the multiple-case study section 6.5). The business environment M3 is operating in includes various dynamic drivers such as currency fluctuations, new market entrants, local regulation changes and customer crises. M3's complexity is caused by the need to customise several features for local needs, based on regulations and legislation on one hand, while building an interoperability architecture and interface for various Enterprise Resource Planning (ERP) programmes on the other. M3's perceived position in the Strategy Formation Matrix is between the Navigator quadrant and the Enabler quadrant (Figure 7-7). M3's management role is balanced between reactive and proactive, due to its dependent nature on market and customer demand on one side (mainly in Europe), and trying to generate innovative features and penetrate new markets (U.S.A and Far-East) on the other. Strategy formation is intended as it defines concrete financial, customers, internal business process, and learning and growth goals (based on the Balanced Scorecard method). Emergent strategy is perceived in scanning for new business opportunities and networking through research projects, allowing a degree of trail and error in innovation development and bottom up emergence of ideas.

Two of the companies positioned in the Turbulent quadrant are small (S6 and S7). S7 is a service and marketing company for a European state local association of technology centres, supporting business incubators and responsible for a network of 65 technology centres. S7's functions include active and systematic networking, fostering innovation and a variety of services. Due to its unique status it has no direct competitors, however it is strongly affected by the various government and other public and private stakeholders. Revenues and regular cash flow has made the business environment dynamic as the company depends on the fluctuating trends of the government budgeting system. S7's perceived position on the Strategy Formation Matrix is in the Environmental quadrant (Figure 7-7). Although the company was set to pursue several intended goals, in reality it is positioned in the Environmental strategy formation quadrant due to its reactive and emergent nature of serving its various stakeholders and customers in the short term.

S6 is as a service oriented company serving as a joint platform for software development and related activities containing twenty-five members. The twenty-five Software companies' various market needs result in high complexity and the instability of the worldwide market in technology and the Software field results in high dynamics. S7's perceived position in the Strategy Formation Matrix is in the Environmental quadrant (Figure 7-7). The company is reactive to its emerging customers needs and constantly adjusts itself to change accordingly.

Based on the above the following observation is made (Figure 7-7):

- **Observation 4:** Companies perceived to be operating in the Turbulence quadrant of the Business Environment Matrix vary in the strategy formation process based on

their size. In general, the larger the company size, the greater the tendency to have a more proactive management role with a more intended strategy formation process.

### 7.3 Companies Projection by Size

The researched sample consists of seventeen companies categorised by size, based on number of employees. Small size companies were defined as employing less than fifty employees, medium size as employing more than fifty and less than two hundred and fifty employees, while large companies employ more than two hundred and fifty employees. Seven of the companies are small, three of the companies are medium size and seven of the companies are large.

This section describes the seventeen companies' projection, by size, on the Business Environment Matrix and on the Strategy Formation Matrix. Due to the relative small number of medium sized companies and their similar characteristic to small companies the two have been grouped and therefore two categories are used in this section, large companies and SMEs (small medium enterprises).

#### 7.3.1 Projection of Large Companies

Figure 7-8 presents the perceived position of seven large size companies (L1 to L7) on the Business Environment Matrix. As can be seen all large companies except one are operating in the upper half of the matrix. L3, the only company operating in a perceived Complex environment is a state Aerospace Research Centre assigned by the Government to define and pursue the National Aerospace Research Program, which collects the needs expressed by the industrial and research arena, taking into account the perspectives in the field of aviation and space on a world-wide scale. L3 is mainly owned by government agencies, and is the smallest of the large companies in this research sample. The remainder of the large companies are publicly or privately owned.

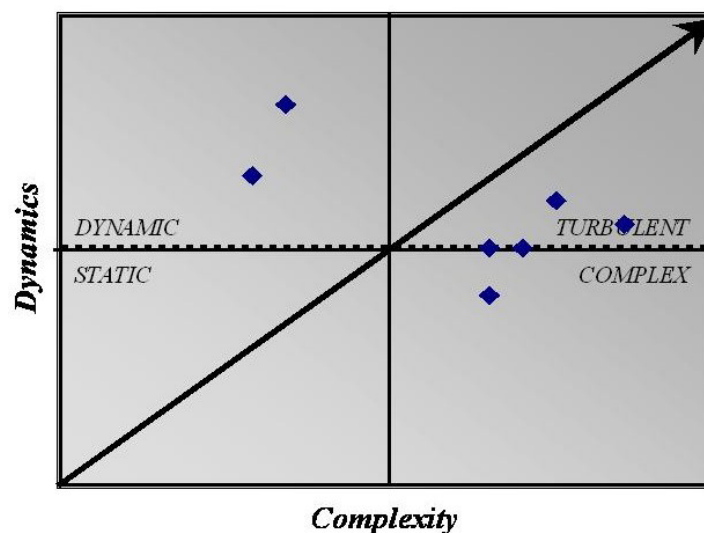


Figure 7-8: Large companies perceived projection on Business Environment Matrix

Figure 7-9 presents the perceived position of seven large size companies (L1 to L7) on the Strategy Formation Matrix. Four of the large companies are positioned in the Navigator quadrant, two in the Enabler quadrant and one in between the Navigator and the Enabler quadrants of the Strategy Formation Matrix. No large company is positioned on the Collective or Environmental quadrants of the Strategy Formation Matrix.

Observing the large companies pattern on the Strategy Formation Matrix (Figure 7-9) a linear diagonal pattern seems to exist. This implies a relation where an increase in management proactive role is identified in general with a more emergent strategy formation process (or vice-versa).

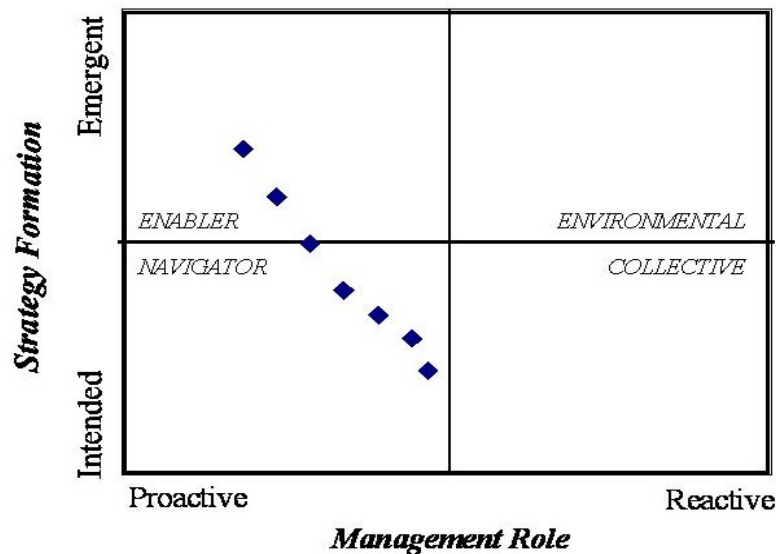


Figure 7-9: Large companies perceived projection on the Strategy Formation Matrix

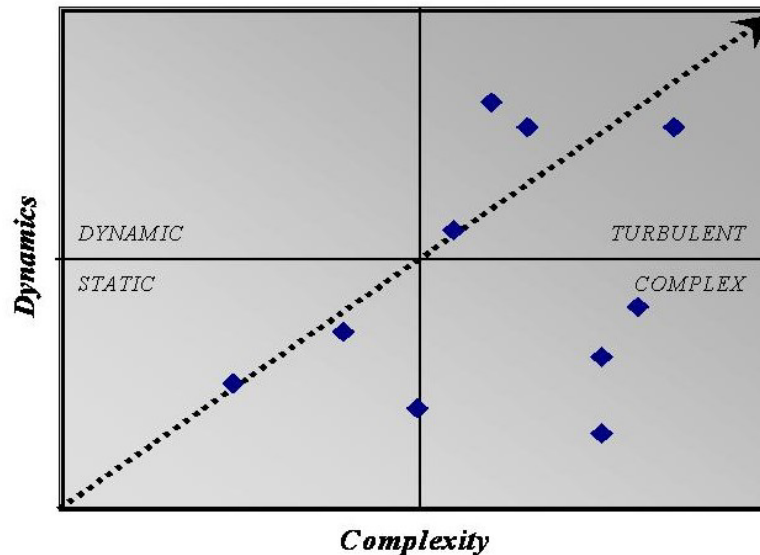
Based on the above, the following observation for large companies is made (Figures 7-8, 7-9):

- **Observation 5:** Large companies tend to be positioned in the upper half of the Business Environment Matrix. Hence, operate in a relatively high dynamic business environment.
- **Observation 6:** In large companies, the management role in the strategy formation process is perceived as proactive.
- **Observation 7:** In large companies, increase in management proactive role is identified in general with a more emergent strategy formation (or vice-versa).

### 7.3.2 Projection of SMEs

Figure 7-10 plots the perceived position of ten small and medium size companies (SMEs) on the Business Environment Matrix. None of the companies are positioned in the Dynamic quadrant. Three of the companies are positioned in the Static quadrant,

three in the Complex quadrant and four in the Turbulent quadrant of the Business Environment Matrix. An interesting observation is that except for two of the companies from the eleven SMEs, all are position on the diagonal bottom half of the Business Environment matrix, hence the complexity of the business environments for each of those companies tends to be perceived as relatively higher than its dynamics.



**Figure 7-10: SMEs perceived projection on the Business Environment Matrix**

Figure 7-11 plots the perceived position of the small and medium size companies (SMEs) on the Strategy Formation Matrix. Four SMEs perceive themselves to be in the Environmental quadrant, three SMEs in the Navigator quadrant, two SMEs in between the Navigator quadrant and the Enabler and one SME perceived itself to be in the Enabler quadrant. None of the SMEs projected themselves on to the Collective quadrant of the Strategy Formation Matrix.

From observing the pattern of the SMEs projection on the Strategy Formation Matrix, a general pattern seems to exist from the scattered projections. As the management role grows more proactive, the more intended the strategy formation becomes or vice-versa.

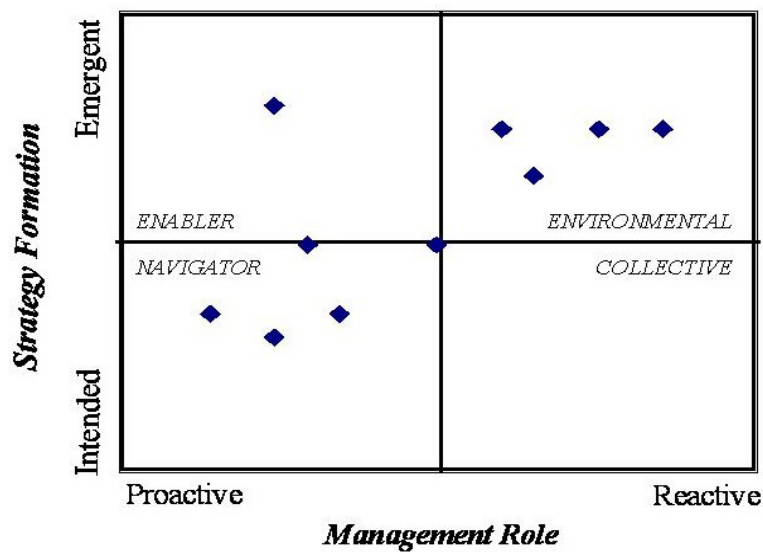


Figure 7-11: SMEs perceived projection on the Strategy Formation Matrix

Based on the above the following observation for SMEs is made (Figures 7-10 and 7-11):

- **Observation 8:** SMEs tend to be positioned in the bottom half diagonal of the Business Environment Matrix. Hence the complexity of the business environments of each company tends to be perceived as relatively higher than its dynamics.
- **Observation 9:** In SMEs the opposite pattern to the large companies seems to exist; as management role grows proactive the strategy formation process becomes more intended.

## 7.4 Research Limitations

The researched projections included data collection from seventeen companies, diversified by size, industry and geographical location. The sample of companies is still relatively small to conduct a statistical analysis. However, qualitative description and tentative relationships have been described.

As discussed in Chapter 6, the projection on the model consisting of the Business Environment Matrix and Strategy Formation Matrix is based on the perception of one or two managers from each company. This perception is based on individuals' assumptions, expectations, knowledge and information about the world of other people and relationships with them, as well as about the non-social world in which the individual lives and acts (Stacey, 2001). However, as mentioned, in some cases the projection is based on a consensus position between more than one manager. In all cases, the triangulation with other sources of data is conducted and examples are asked. Several sources that did not meet this request were not included in the research findings.

The perceptions of the companies were positioned in a qualitative manner. Managers positioned their company's projection directly on both Matrices. An alternative



approach would have been to define parameters for each dimension, quantify output and generate the projection mathematically. However the advantage of direct projection on the Matrix is that you do not risk choosing wrong parameters or using wrong weights. The direct positioning allows further investigation with the interviewed manager and helps to deepen the understanding in real time, where needed.

The accumulated information on the seventeen companies was based on different data collection methods and tools. Some of the perceived projected positions were collected by interview, while others through workshops.

One of the research weaknesses is that data collection and companies perceived projections were collected in a period of about two years. As a result, different times are represented in different positions. However, as observed in the previous Chapter, companies change positions over time in the Strategy Formation Matrix. If the strategy formation is related or even derived partially from the business environment, as observation testifies, then each position on both Matrices is context specific. Conducting the sample at the same period is therefore not a substantial limitation.

## 7.5 Summary

In this chapter the relationships between business environment, strategy formation process and management role were investigated based on a sample of seventeen diversified companies. Two matrices were used. The Business Environment Matrix represents dynamics and complexity (based on Buchner *et. al.*, 1998) of the business environment. The strategy formation process and the management role within the process were represented using the Strategy Formation Matrix (generated and validated in Chapters 5 and 6). The results were investigated based on the position in the Business Environment Matrix quadrants (Dynamic, Static, Complex and Turbulent) and based on size.

As noticed in the multiple-case study and in the action research, managers perceive companies as incorporating a blend of emergent and intended strategy formation processes. The definitions and the model were clearly understood by managers, as claimed by them and as evident in the examples and descriptions given in the interviews, workshops, surveys and other data collection sources. The logic of the two dimensions of the Business Environment, dynamics and complexity, are well understood by managers.

Figure 7-12 presents the researched companies' perceived projection on the Business Environment Matrix and Strategy Formation Matrix, classified by type of turbulence, presented next to each other (starting from Dynamic quadrant, Static quadrant, Complex and Turbulent quadrant). The following observations were made in this Chapter:

- **Observation 1:** Companies perceived to be operating in the Dynamic quadrant of the Business Environment Matrix tend to be large and are positioned in the Enabler quadrant of the Strategy Formation Matrix. They perceive themselves to have an emergent oriented strategy formation process with management playing a pro-active role (Figure 7-12 and Section 7.2.1).

- **Observation 2:** Companies perceived to be operating in the Static quadrant of the Business Environment Matrix tend to be small and endure an emergent strategy formation process (upper half of the Strategy Formation Matrix) (Figure 7-12, and section 7.2.2).
- **Observation 3:** Companies perceived to be operating in Complex quadrant of the Business Environment Matrix are positioned in the Navigator quadrant of the Strategy Formation Matrix and are primarily highly specialised companies. They are perceived to have a pro-active management role in an intended strategy formation process (Figure 7-12 and Section 7.2.3).
- **Observation 4:** Companies perceived to be operating in the Turbulent quadrant of the Business Environment Matrix vary in the strategy formation process based on their size. In general, the larger the company size the greater the tendency to have a more proactive management role with a more intended oriented strategy formation process (Figure 6-12 and Section 7.2.4).

**Observation based on company's size:**

- **Observation 5:** Large companies tend to be positioned in the upper half of the Business Environment Matrix. Hence, operate in a relative high dynamic business environment (Figure 7-8).
- **Observation 6:** In large companies management role, in the strategy formation process, is perceived as proactive (Figure 7-9).
- **Observation 7:** In large companies, increase in management proactive role is identified in general with a more emergent strategy formation (or vice-versa) (Figure 7-9).
- **Observation 8:** SMEs tend to be positioned in the bottom half diagonal of the Business Environment Matrix. Hence the complexity of the business environments of each company tends to be perceived as relatively higher than its dynamics (Figure 7-10).
- **Observation 9:** In SMEs the opposite pattern to the large companies seems to exist; as management role grows proactive the strategy formation process becomes more intended (Figure 7-11).

**An additional observation can be made:**

**Observation 10:** None of the companies projected themselves on the Strategy Formation Matrix Collective quadrant (Figure 7-12).

Chapters 4, 6 and 7 have presented findings from diverse companies using multiple research methods. Chapter 8 will discuss these findings and review the theoretical and practical implications.

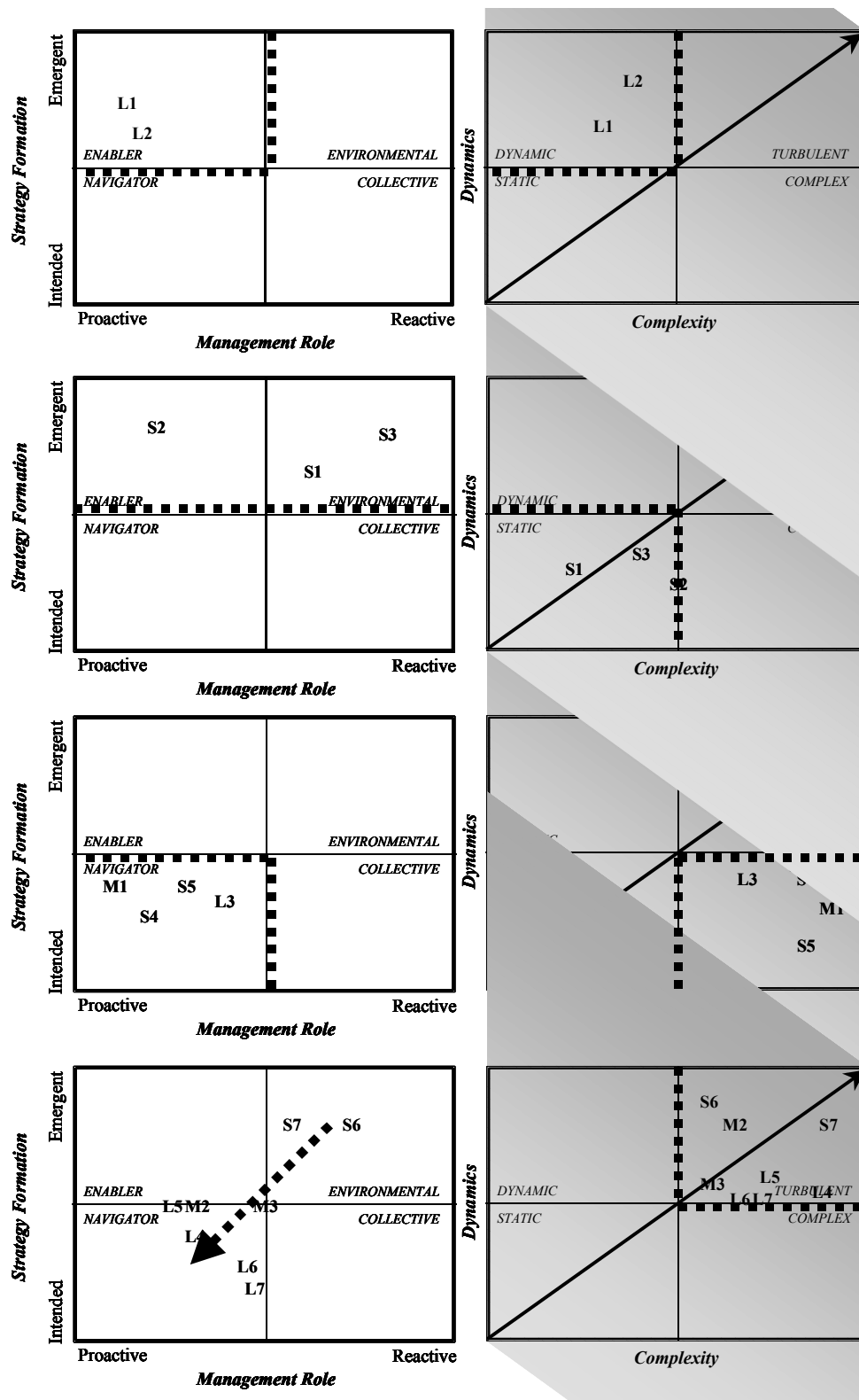


Figure 7-12: Overview of researched company's projection on the Business Environment Matrix and the Strategy Formation Matrix

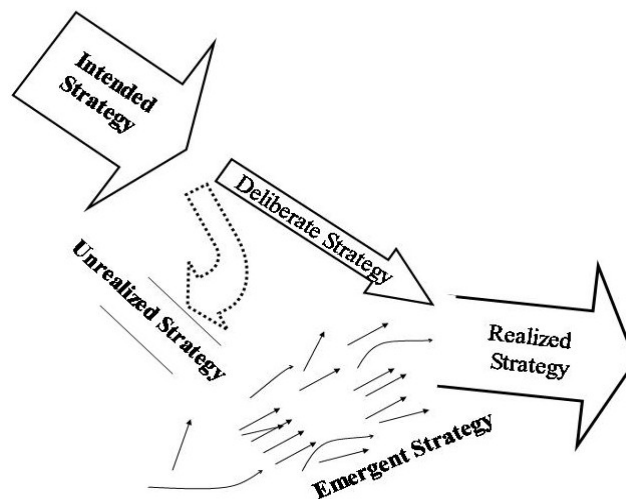


## 8 Discussion

*The aim of this Chapter is to provide the reader with the findings of the Model Development and Validation phases which are discussed and expanded upon. Useful insights on substantive literatures and current thinking within the field of strategy management are used to enhance this discussion*

### 8.1 Strategy Formation Process Representation

Mintzberg (1987) was one of the first to point out that that the realized strategy of an organisation can strongly differ from the intended strategy. The extent to which an intended strategy can be realized is closely related to the strategic processes that exist within the organisation (Feurer and Chaharbaghi, 1995). Figure 8-1 presents the commonly used representation of the strategy formation process. The plan is labelled as intended and the pattern as realized strategy, distinguishing deliberate strategies, where intentions that existed previously were realised, from emergent strategies, where patterns developed in the absence of intentions, or despite them.



**Figure 8-1: Model of intended and emergent strategy formation process (Mintzberg, 1987)**

The findings from this research suggest that although this representation includes emergent strategy, a few aspects are lacking, and the model needs refinement, to more accurately portray what happens in the strategy formation processes of companies.

### 8.1.1 *Intended Strategy*

The multiple case study (Chapter 6) conducted on a sample of six diversified companies shows that all managers perceive that they are executing some level of intended strategy. Examples include formulating a business plan, searching for synergy, making strategic investments, building partnerships, customising products, setting goals and objectives and launching quality and efficiency initiatives, such as six sigma. Even S3, a high precision parts manufacturer (section 6.6), that was projected on the Strategy Formation Matrix in the Environmental quadrant as having a highly emergent strategy, where the management role is mainly reactive to one of its big customers, reported significant intended strategy realisation, such as strengthening its competence image, making strategic investments and networking with suppliers.

However, from the action research conducted in HiCo (Chapter 4), it can be seen that the formulation of intended strategy is not a totally rational process. Stakeholders influence the process for example, members of the Board of Directors are keen to pursue specific initiatives, managers align business activities to job promotion, also there exists personal rivalries, professional interests, and unit managers interfering in favour of their unit's interests. Networking and partnering are also composed of intended and emergent characteristics. As one manager of L1, a leading telecommunications services provider admitted: "*we might decide there is an area we would like to explore...so there's a bit of planning going on but there's also some emergence as well [for example suddenly being approached by another company]...Do you plan friendships?... There has to be some degree of trust.*"

*Intended strategy formation incorporates emergent influences*

### 8.1.2 *Enabling Emergent Strategy*

Johnson and Scholes (1988) regard emergent strategies as strategies that come about without the explicit intention of managers but which result from the flow of more operational, day to day decisions. Several examples of emergent cases were presented in the HiCo action research study (Chapter 4) and the multiple case study (Chapter 6).

A major debate exists within the literature as to whether management can set enabling preconditions to enhance and support even partially bottom up, emergent strategy. Mitleton-Kelly (2003) argues that when enabling conditions permit an organisation to explore its space of possibilities; the organisation can take risks and try new ideas. Several authors suggest a defined set of preconditions (for example Wood, 1999; Hamel, 2001 and Olson and Eoyang, 2001). In the Strategy Formation Matrix (Figure 5-1), the Enabler quadrant is characterised by emergent strategy formation with management playing a proactive role. Several strategy schools such as the Learning school and Complexity logic (Chapter 5) and companies such as L1, L2 and S2 (Chapter 6 and 7) are projected in the Enabler quadrant.

Although no data in the research is presented relating to cause and effect or efficiency of management role as enabler, a wide variety of examples suggest that such activities indeed take place. The HiCo action research (Chapter 4), the multiple case study (Chapter 6) and the additional company investigations (Chapter 7) present examples of various enabling activities such as: employee empowerment, encouraging new voices, diversification, supporting trial and error and risk taking initiatives, conducting various workshops to enhance bottom up ideas such as “open space” and brainstorming with clients. Furthermore, the HiCo action research (section 4.4.4) presents a large scale cross company strategy formation process where management consciously blended intended and emergent strategy.

Enabling emergent strategy is defined as a stream of action aiming to set preconditions for emergence. In Mintzberg’s (1987) representation, an enabling strategy is not presented. Since literature in the last decade has strongly occupied itself with the precondition for emergence, as well as the research data supporting the existence of such a strategy, the representation of the strategy formation process should be revised to incorporate the enabling of emergent strategy.

*Enabling emergent strategy is defined (by the author) as a stream of action aimed at setting and supporting preconditions for emergence*

### 8.1.3 *Business Environment*

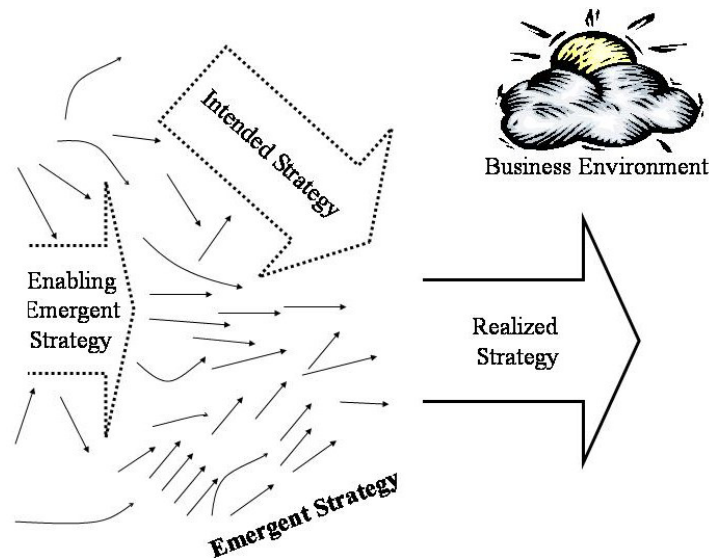
The investigation of all the seventeen researched companies revealed links between the business environment of the organisation and the characteristics of the strategy formation process. In HiCo (Chapter 4) for example, some of the effects of the business environment included that the pace of change frequently outdates strategy plans, there are periods of low forecasting ability, unpredictable global events impact strategy and even the duration of the phrase “long term” changed over time and context. The researched companies’ projection on the developed Strategy Formation Matrix and

Business Environment Matrix (Chapter 7) clearly showed patterns and links between the two. For example, companies perceived to be operating in the complex business environment experienced an intended strategy formation process (Figure 7-12 and Section 7.2.3).

*The organisation's strategy formation process is influenced by the business environment*

#### 8.1.4 Refined Representation of the Strategy Formation Process

By integrating these discussion points and research insights concerning the representation of the strategy formation process, a refined model is presented in Figure 8-2. Similar to Mintzberg's (1987) strategy formation process, it includes realized strategy consisting of inputs from both intended and emergent strategies. Some of the emergent as well as intended strategy is unrealised. However two additional aspects distinguish the new representation from Mintzberg.



**Figure 8-2: Refined representation of the strategy formation process**

Enabling emergent strategy is added to represent a driving force and infrastructure for management activities and behaviours that help encourage emergent strategy. This by no means implies it to be the only force or the major one. As the business environment has also been shown to affect the strategy formation process (Chapter 6 and 7), it is also added to the model. The author has removed terms that were in the original model for simplification. Unrealized strategy has been omitted from this revised model as it was felt that this was an inherent part of the strategy formation process and did not need to be emphasised in this model. The author also chose to omit deliberate strategy from this model as deliberate strategy is intended strategy that had been realized and therefore there is little need to include this in the model.

Mitleton-Kelly (2003) argues: “Complex systems are not ‘designed’ in great detail. They are made up of interacting agents, whose interactions create emergent properties, qualities, and patterns of behaviour. It is the actions of individual agents and immense



variety of those actions that constantly influence and create emergent macro patterns or structures” (pg 46-47). This argument is supported by the research finding of stakeholders’ influence. The refined representation of the strategy formation process is in some sense messier than reflected in Mintzberg’s (1987) model. The intended and enabling strategy in Figure 8-2 is open to emergent influence that is scattered all over the strategy formation process and does not just emerge from bottom up, as originally implied in Mintzberg’s (1987) model.

## 8.2 The Strategy Formation Process in Different Types of Organisations

The strategy formation process differs between different types of organisation. The structured analysis based on the Strategy Formation Matrix, the Business Environment Matrix and the complementing data collection, casts new light on the schools of thought, management role and relationship between business environment and the strategy formation process.

### 8.2.1 Schools of Thought

Chapter 5 introduced and theoretically investigated the Strategy Formation Matrix and various strategic management schools segmentation (Mintzberg *et al.*, 1998; Stacey, 2000 and Lengnick-Hall and Wolff, 1999) and projection. Figure 8-3 presents a summary of the schools’ projection on the Strategy Formation Matrix (Chapter 5) and Figure 8-4 presents the researched companies’ projection (Chapter 7). Mintzberg and Lampel (2001) point to a range of variants that cut across the schools and blend them together. Common characteristics can be found between researched companies’ strategy formation and these schools of thoughts.

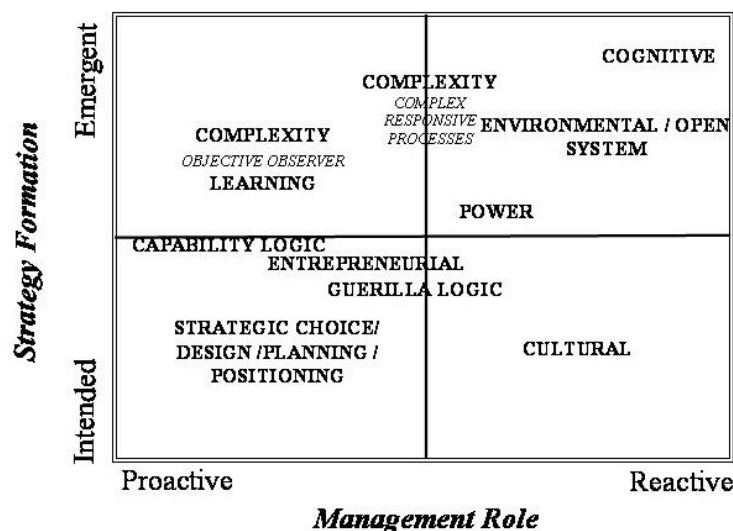


Figure 8-3: Schools’ projection on the Strategy Formation Matrix

For example, two large companies and one small company perceived their position in the Enabler quadrant of the Strategy Formation Matrix (Figure 8-4). L1 is a leading

European telecommunications services provider while L2 is one of the world's leading research-based pharmaceutical and healthcare companies. The Learning school (Mintzberg *et. al.*, 1998 and Stacey, 2000) and Complexity - Objective Observer (Stacey, 2000 and Lengnick-Hall and Wolff, 1999) are examples of schools positioned in the Enabler quadrant (section 5.7) and resemble some of L1's and L2's strategy formation characteristics, such as increasing awareness and anticipation of the future by exploration, diversification, enhanced internal communication and middle management empowerment. S2 is a very small consulting firm specialising in a specific niche of psycho-strategic consulting for individuals, teams and organisations. The company's two partners are dominant and also serve as the main resource. The strategy formation somewhat resembles Stacey's (2000) complex responsive process (Section 5.7) where intention emerges in ordinary conversation between people and managers cannot think of themselves in terms of organisational designers but rather as active participants in a complex process.

In the Environmental quadrant of the Strategy Formation Matrix only small companies operate (Figure 8-4). The characteristics of the researched companies resemble Mintzberg *et. al.*'s. (1998) Environmental school and Stacey's (2000) Open System school because of their reactive nature to changes in the environment, usually originating from their main customers.

As can be seen in Figure 8-4, companies of various sizes operate in the Navigator quadrant of the Strategy Formation Matrix. The SMEs for example, include S5 which is a biotechnology company specialising in niche micro fluidic controllers, S4 which is a regional competence and innovation centre for fuel-cell technology and M1 which is an insurance and financial company specialising in a unique niche. The complex business of all of the companies demand them to acquire knowledge and expertise through long term intended investments. Some of the schools related to the Navigator quadrant such as Mintzberg *et. al.*'s. (1998) Planning school and Stacey's (2000) Strategic Choice theory resembles, to some extent, the companies' strategy formation process that is rather controlled, conscious and formal.

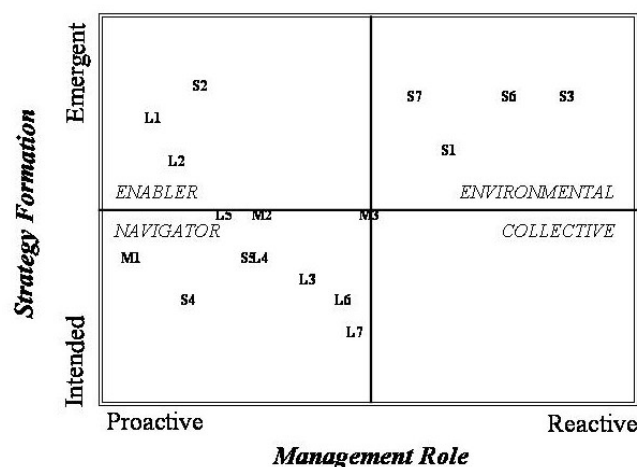


Figure 8-4: Researched companies projection on the Strategy Formation Matrix

No companies from the seventeen-researched sample perceived their position in the Collective quadrant of the Strategy Formation Matrix. The Cultural school is the only school projected in this quadrant. In the Cultural School, strategy formation is described as a collective process. Mintzberg *et al.* (1998) describe the Cultural school as concerning itself largely with the influence of culture in maintaining strategic stability, sometimes in actively resisting strategic change. Culture was discovered in management in the 1980s, largely due to the success of Japanese corporations and probably relates mainly to Far East organisations. Since the research was conducted in European companies it is not surprising that no companies related to this strategy formation characteristic.

Several scholars pursue the idea that during an organisational life-cycle, management should endure different best-fit strategies at different times. Mintzberg *et al.*'s (1998) Configuration school encompasses those of the other schools, but each in a well-defined context. They state that *"Most of the time, an organization can be described in terms of some kind of stable configuration of its characteristics... for a distinguishable period of time, it adopts a particular form of structure matched to a particular type of context which causes it to engage in particular behaviours that give rise to a particular set of strategies... These periods of stability are interrupted occasionally by some process of transformation—a quantum leap to another configuration"* (pg 305). This statement is aligned with the multiple case study (Chapter 6), where all companies experienced different strategy formation types and management roles at different times. Following the analysis in Chapter 7 it can be seen that these changes are linked to some degree to changes in the business environment.

### 8.2.2 Management Role

It has been seen that management role in strategy formation differs by company size. Whilst management role in SMEs varied between blends of proactive and reactive involvement, the large companies' management role in the strategy formation process was perceived, in all cases, as proactive. (observation 6, section 7.3.1). This observation is not surprising since the managers of large companies are less involved in the every day business life that could be regarded as reactive. The corporate level strategy involves deciding what business to be in and determining how to segment environments and the organisation such that different parts of the organisation can address opportunities with maximum overall results (Hatch, 1997). The strategy formation process at HiCo (Chapter 4), for example included, aspects such as Synergy and Mergers and Acquisitions that are less substantial in SMEs' strategy.

A rather interesting observation relates to the link between management's proactive role and the perceived strategy formation type. While in SMEs, the general tendency is to relate an increased proactive role to a more intended strategy formation process (Observation 9, section 7.3.2), in large companies, an increase in management's proactive role is linked to a more emergent strategy (Observation 6, section 7.3.1). M2's managers, for example, experienced a blend of emergent and intended strategy in 2002, positioned between the Enabler and Navigator quadrant of the Strategy Formation Matrix (Figure 8-5). The company at the time was reactive to its customer's needs and proactive in leveraging emerging opportunities. In 2003, management, usually

occupied by professional aspects on the one hand and fire fighting on the other, decided to take more control and become proactive. Management increased its proactive role in setting strategy for improving profit and to penetrate large customer segments. New intended activities were structured, such as improved definitions of services, setting sales targets, defining policies and procedures, new compensation plans and a clearer definition of responsibilities.

### M2 – Industrial Design Company

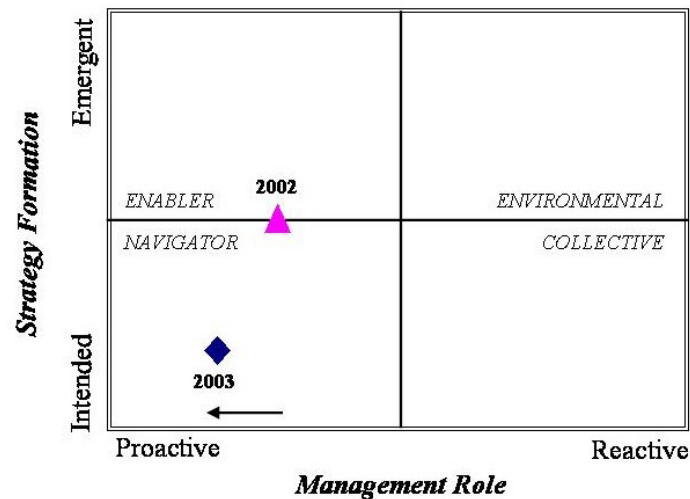


Figure 8-5: SME example of changes in management role

As mentioned, in the large companies, a more proactive management role is linked to greater emergent strategy. Supporting evidence can be found in L7, a global financial company. L7's perceived position on the Strategy Formation Matrix in 1999 was in the Enabler quadrant (Figure 8-6). The company at that time was well positioned in the global market, and showed Enabler characteristics as claimed by its management "*L7 accomplished this feat by developing and implementing new organisational and technological structures to maximise the sharing of knowledge among its local business units and its partners ...with the success of its virtual business model, L7 realised that the sum of its networked operations were more valuable than the individual parts. [L7 developed] a management model, to provide a more balanced, truer picture of operations – a balance between the past, the present and the future*". However, in 2003, the perceived position reflects a dramatic shift to the Navigator quadrant. This position is aligned with challenges and constraints identified such as "*financial and share pressure placing emphasis on short-term issues*" and "*management turbulence distracting the company from identifying and addressing global problems*". The management role became substantially more reactive than before in the strategy formation process (Figure 8-6) focusing on intended activities such as enhanced corporate governance and tighter business control.

### L7 – A Global Financial Company

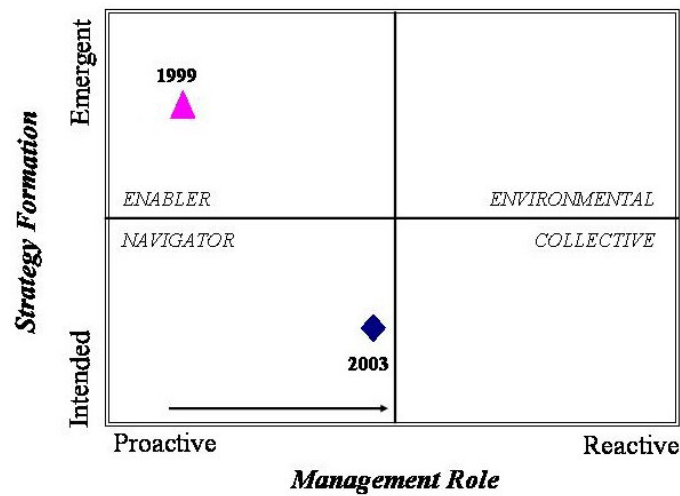


Figure 8-6: Large company example of changes in management role

#### 8.2.3 Strategy Formation and Business Environment

A recent advance in technology, coupled with a global political climate that is favourable to free markets has caused some industries to be more turbulent (Chakravorthy, 1997). Hamel and Valikangas (2003) claim the world is becoming turbulent faster than organisations are becoming resilient. There is a general tendency in literature to claim that in turbulent environments companies should implement a radical or organic natured strategy formation process. Stacey for example (2000) claims the more unpredictable the environment becomes the more decentralised the organisation becomes, pushing the focus decision down the hierarchy. Hatch (1997) claims that in turbulent situations strategy is used as a sensemaking device to allow organisational members to act and thereby to produce order out of chaotic experiences. Mintzberg and Lampel (2001) claim the more unpredictable and confusing the external world is the more 'natural' (versus rational) the internal processes should be. Lissack (1999) argues traditional models, based on hierarchical command and control and centralisation of power, are not adequate for turbulent environments and suggest using models from new science (complexity theory). Courtney *et al.* (1997) suggest pattern recognition and non-linear dynamic models, while Duncan (1972) argues that as the environment becomes more dynamic and complex it is only organic (rather than mechanistic) organisational systems that will survive - those with flexible, political, intuitive modes of making decisions.

The research findings however suggest otherwise (section 7.2.4). Large companies for example, perceived to be operating in a *turbulent* environment, incorporate a more controlling and directive rather than emergent and organic strategy formation process. L7 for example, when it encountered turbulence, retained a high pro-active management role while also transforming it to be more intended (central control, focus on core activities, and a closure of unprofitable activities). Small companies perceived to be operating in the turbulent environment are mainly reactive to their customers. Medium sized companies seem to incorporate some of the characteristics of the large and small

companies. Learning and complexity oriented strategy formation do exist in companies operating in a *dynamic* business environment (section 7.2.1). High dynamics with middle to low complexity led companies like L1 and L2 to incorporate more organic strategy to confront the fast rate of change.

One explanation to the deviation of the empirical finding from the literature could be explained through L7, a global financial company (section 6.3). In 2001, the company witnessed emergent strategy leading to growth and management invested in efforts as an enabler. However, as the environment became more turbulent, survival became the main management concern, leading to clear intended measures. This phenomenon could also be relevant to other large companies from the research sample.

Another explanation, in some cases, could be attributed to the non-unified interpretation of turbulence. De Geus (1997) for example, claims that continuous, fundamental changes in the external world – a turbulent business environment – require continuous management of change in the company. The interpretation he gives is aligned with the dynamic rather than turbulent (medium-high complexity + dynamics) definition adopted by this research.

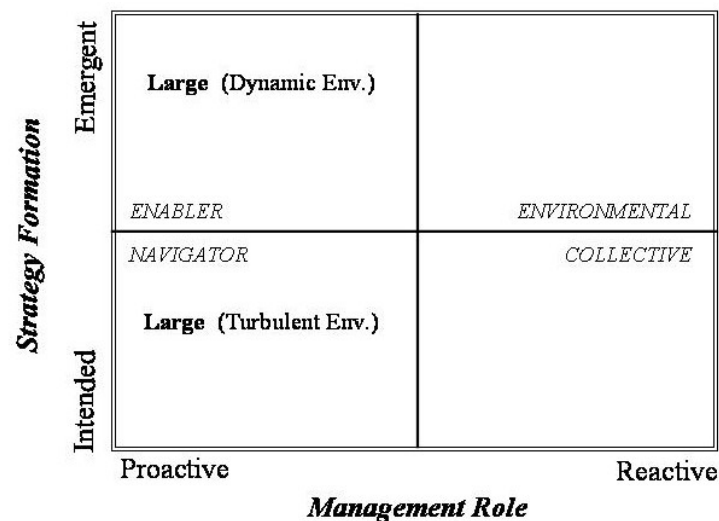
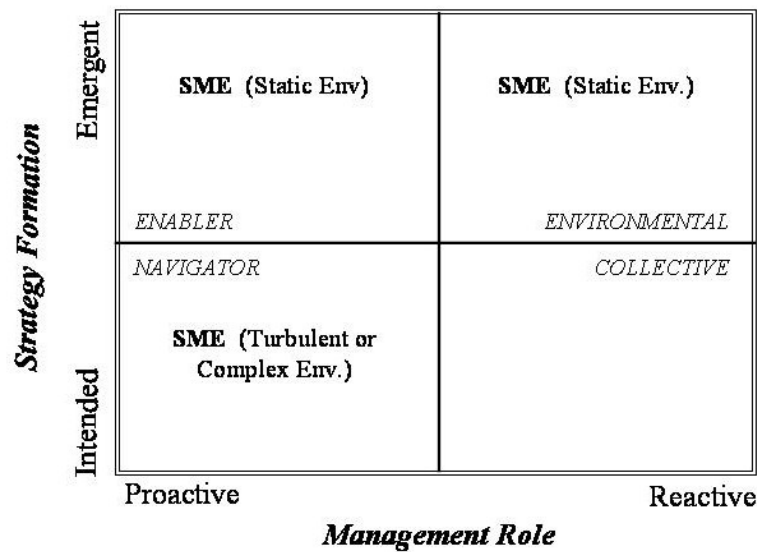


Figure 8-7: Relation between size, strategy formation and business environment



**Figure 8-8: Relation between size, strategy formation and business environment**

Figure 8-7 and 8-8 present a summary of the relation between size, strategy formation and business environment. Figure 8-7 presents the large companies and Figure 8-8 presents SME's.

Another contradictory finding in relation to the literature is the tendency to link traditional rational tools such as planning to companies operating in a *static* environment (for example Courtney *et al.*, 1997; Hatch, 1997 and Mintzberg and Lampel, 2001). The companies who perceived themselves (section 7.2.2) to be operating in a static environment did not invest management effort in a strategy formation process. Strategy was mainly emergent and reactive to the customers or major market shifts, whilst the management of companies operating in a perceived complex environment (section 7.2.3) were the ones who prepared long term plans and used rational analytical tools.

### 8.3 Managers Perception and Quantification of Turbulence

Turbulence, a main aviation hazard caused by sudden change of wind speed or direction, holds a variety of interpretations when used as a phrase within the economic and business context. In the research, a common approach was adopted to define turbulence as the result of two main influences – complexity and dynamics (Duncan, 1972; Mintzberg *et al.*, 1998 and Buchner *et al.*, 1998). Complexity is the number of external factors that have to be considered during the decision making process, the disparity of these factors and their distribution across the various business areas. Dynamics is the frequency of change in the factors in decisive business areas, the degree of radicalism these changes exhibit and the regularity of their occurrence. As can be seen on the Business Environment Matrix (Figure 7-2), only situations that combine high complexity and high dynamics lead to what is referred to as a turbulent environment.

Based on the workshops and interviews conducted, it seems that a simplification of the term turbulence can be misleading. From the gathered experience, it seems when managers were confronted with the general question of how to describe their environment they tend to “carelessly” use the phrase turbulent. The projection of the researched companies on the Business Environment Matrix (Figure 7-3) shows that when managers are asked to define their companies’ business environment in a systematic way the result might differ from their initial intuitive response. The seventeen researched companies’ projection on the Business Environment matrix (Figure 7-3) is composed of two companies operating in the Dynamic quadrant, three in the Static quadrant, four in the Complex quadrant and eight in the Turbulent quadrant.

A one-dimensional representation of the environment such as uncertainty level (Courtney *et al.*, 1997), cause and effect (Stacey, 2000) or unpredictable/confusing vs. comprehensible/controllable (Mintzberg *et al.*, 1998) limits the ability to distinguish between the companies and fully understand the link to the strategy formation process. The comprehensive definition of the business environment, based on dynamics and complexity, allows improved understanding. For example, some companies, although operating in high uncertainty, are positioned differently in the Dynamic and Turbulent quadrants of the Business Environment Matrix (Chapter 7) and have different strategy formation processes.

#### 8.4 Company Size and Business Environment

The research included seven large companies and ten SMEs. Six of the seven large companies (except L3 that holds unique characteristics in terms of size and occupation, discussed in section 7.4.1) can be categorised as corporations since they have a multi-industry or multi-product-market and compete indirectly through their business units (Segev, 1997).

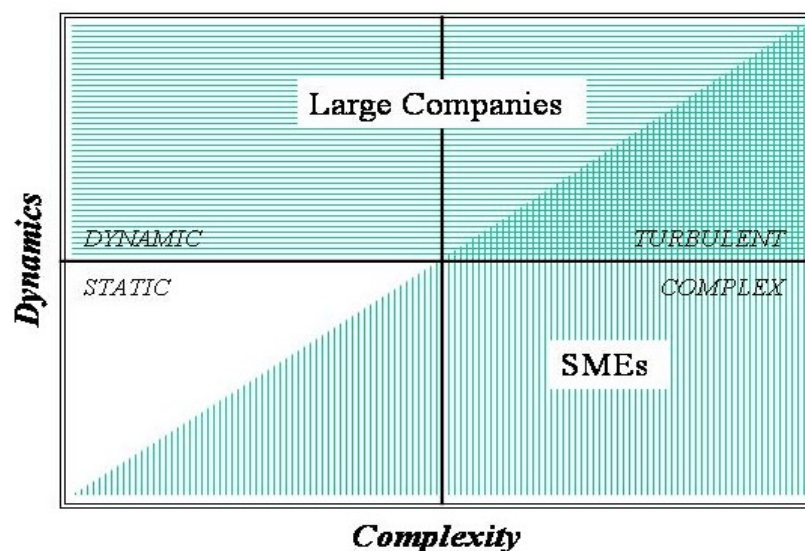


Figure 8-9: Perceived business environment by company size



---

Large companies tend to be positioned in the upper half of the Business Environment Matrix (Observation 5, section 7.3.1). Hence, they operate in a medium to highly dynamic business environment. A proposal that can be made is that large companies are not static because economically they are vulnerable to small company attacks. SMEs have a relative advantage in a static environment due to their greater flexibility and reduced overhead costs. However, they cannot compete with large companies in a dynamic environment in terms of the resources needed. SMEs tend (Observation 8, section 7.3.2) to be positioned in the bottom half diagonal of the Business Environment Matrix. Hence the complexity of the business environments of each SME company tends to be perceived as relatively higher than its dynamics. This can be attributed to the fact that higher complexity calls for expertise. SMEs generate value and operate in markets where the need to specialise is greater in general than the pace of change.

## 8.5 Summary

Several key research findings and insights were identified that reduced some of the gaps identified in the literature review (Chapter 2). The action research study (Chapter 4) and multiple case study (Chapter 6) increased the knowledge on strategy formation in general and the blend of intended and emergent in particular. The theoretical investigation of the Strategy Formation Matrix added a new dimension to existing knowledge by comparing existing theories based on the strategy formation type versus management role in the strategy formation process.

The initial aim of the research of providing an investigation of the theoretical and empirical relations between strategy formation, management role and business environment within different organisations and at different times was met, generating various findings regarding the links and the differentiation of size. These findings contributed to creating new knowledge as well as challenging existing models representing the relations between business environment and the strategy formation process.



# 9 Conclusions

## 9.1 Research Objectives

The initial aim of the research was to provide an investigation of the theoretical and empirical relations between strategy formation, management role and business environment within different organisations and at different times. The following section discusses how the research objectives were met and identifies specific conclusions that have been drawn.

### 9.1.1 Research Objective 1

#### **Objective 1:**

*To contextualise the different types of strategy theory that exist with relation to the strategy formation process.*

A deep understanding of strategy theory with relation to strategy formation was obtained by a extensive literature review, as presented mainly in chapters two and five. An abundance of literature available within the field of strategy management has led to an array of perspectives on the subject and the publication of overlapping and competing conceptual models. The author has therefore chosen to focus on the framework and theories that segment the field to different paradigms offered by Lengnick-Hall and Wolff (1999), Stacey (2000) and Mintzberg *et. al.* (1998). This helped to establish a common understanding of the field, from a holistic perspective, and gave the author a language to discuss the strategy literature within the context of the whole thesis.

In chapter five, the Strategy Formation Matrix was developed in order to investigate the relation between the strategy formation type (intended versus emergent) in relation to the management role in strategy formation process (proactive versus reactive). The

theoretical projections on the Strategy Formation Matrix reflected how different strategy schools incorporate different blends of intended and emergent strategy formation processes and how the management role in strategy formation varies in its level of proactive involvement. It was seen that a recent literature trend, inspired by complexity studies, concentrated on a variety of strategy formation blends that are mainly emergent oriented and usually regard management as proactive in the strategy formation process.

The review of the literatures surrounding the strategy formation process, the role of management and the business environment of organisations within this process has led to several conclusions and acted as a basis for the research study. Firstly it was concluded that within the literature surrounding intended strategy formation, the role that management plays is well documented and clear. Whereas, from the review of the literature surrounding emergent strategy formation, the role of management is less well defined and there appeared to be great debate about what this role should involve. Secondly, there is now a firm recognition that organisations face business environments that are not only stable and static but also turbulent and dynamic. Historically, literature within the field of strategy management focussed upon the former business environment condition but increasingly focus is being applied to the latter. This allowed for a link to be established within theory which stated that organisations facing a turbulent business environment tend to adopt a more emergent strategy formation process. Finally it was concluded that scant attention has been paid to, within literature, organisational type and size when discussing strategy formation, especially in the context of emergent strategy formation. It was concluded that discussions very often focus around large, multinational organisations and smaller organisations have been somewhat ignored.

### 9.1.2 Research Objective 2

#### **Objective 2:**

*To investigate the relationships between the strategy formation process, the management role within this process, the organisation type and the business environment that the organisation operates in. .*

The relationship between the type of organisation, the environment within which the company operates and the strategy formation process was investigated by doing an in depth action research study in a large high-tech company (Chapter 4) and a survey and case studies in 16 additional small, medium and large companies (Chapters 6 and 7).

The key findings were that:

- The business environment influences the strategy formation process within organisations and in terms of the management role.
- The size of the organisation affects its strategic characteristics.
- Large companies, in the form of corporations tend to operate in a dynamic or turbulent business environment.

- 
- SMEs tend to operate in an environment dominated by higher complexity than dynamics.
  - Management role in the strategy formation process in large companies is regarded generally as proactive.
  - In SMEs, the management role in the strategy formation process consists of a wide range of blends from almost purely reactive to proactive.
  - A different perception of the managements' role in strategy formation exists in different business organisation types. While in the SMEs a more proactive approach is related with planning and control, in large organisations it is more associated with setting the infrastructure and preconditions for enabling emergent strategy.
  - Similarities can be found for example between the Learning, Complexity, Capability Logic and Strategic Choice Schools and the strategy formation process in large corporate companies. In SME the strategy formation varies for example between the Environmental and Strategic Choice Schools.
  - Only SMEs operate in a static business environment, experiencing a blend of mainly emergent strategy and a management role that is predominantly reactive to the business environment.
  - Companies operating in a complex business environment were shown to be implementing an intended strategy formation process, while companies operating in a dynamic business environment were identified as large and as having a more organic strategy process.
  - Companies operating in a turbulent environment differed based on size. Whilst large companies incorporated a controlling and directive rather than emergent and organic strategy formation process, small companies were mainly reactive to the business environment.

### 9.1.3 Research Objective 3

#### **Objective 3:**

*To develop a model to describe and explain the relationships between the strategy formation process, the management role within this process, the organisation type and the business environment that the organisation operates in.*

In Chapter 4 (HiCo action research) Mintzberg's (1987) model of strategy formation was investigated, validated and extended through 16 cases. Based on further findings the representation was discussed in Chapter 8 and an alternative representation, incorporating the research insight was offered. Some of the changes include stakeholders influence on intended strategy, and additional dimensions to the strategy formation process of the business environment and enabling emergent strategy (defined

by the author as a stream of action aimed at setting and supporting preconditions for emergence).

In Chapter 5, the Strategy Formation Matrix was developed in order to investigate the relation between the strategy formation type (intended versus emergent) in relation to the management role in the strategy formation process (proactive versus reactive). The Strategy Formation Matrix was validated theoretically in relation to existing strategy theories in Chapter 5 and in relation to a sample of companies in Chapter 6.

The model was extended to incorporate the business environment in Chapter 7 based on Buchner *et al.*'s (1998) turbulence portfolio. Empirical investigation was conducted on the extended model supported by data collection from the seventeen researched companies.

Results were discussed and compared to existing models in Chapter 8. For example, strategy literature has a propensity to link greater turbulence with a more emergent strategy formation process and a static business environment with a more intended strategy. However, the research found evidence to the contrary. It was seen that SMEs operate in a static business environment, experiencing a blend of mainly emergent strategy and a management role that was predominantly reactive to the business environment. Companies operating in a complex business environment were shown to be implementing an intended strategy formation process, while companies operating in a dynamic business environment were identified as having a more organic strategy process. Companies operating in a turbulent environment differed based on size. Whilst large companies incorporated a controlling and directive rather than emergent and organic strategy formation process, small companies were mainly reactive to the business environment.

## 9.2 Contribution to Knowledge

The contribution to knowledge was made in the field of strategy formation. This involved the testing and refinement of Mintzberg's (1987) model, based on empirical evidence from a diversified sample of seventeen companies.

The empirical research showed that Mintzberg's (1987) strategy formation process should be refined to include the influence of the business environment and to add Enabling Emergent Strategy. The Enabling Emergent Strategy aims at setting and supporting the preconditions for emergence. Emergent strategy was found not to come from just the bottom of the organisation, as implied by Mintzberg's (1987) model, but also it blends with intended strategy and is scattered all over the strategy formation process.

In general, the larger companies have a more proactive management role than the SMEs, positioning themselves in the Enabler and Navigator quadrants of the Strategy Formation Matrix. For example, this relates to the Learning School, the Complexity – Objective Observer Schools and the Planning and Strategic Choice Schools. The Environmental quadrant is dominated by SMEs and resembles, for example, the Environmental Schools and Stacey's (1999) Open System Schools.

In SMEs, an increased proactive management role is related to a more intended strategy formation process, related to more planning and control. However, in larger companies it is related to a more emergent strategy formation process, where the pre-conditions and infrastructure for emergence are set.

Previous research has suggested that as an organisations environment becomes more turbulent, an organisations strategy should become more organic. However, this research found evidence to the contrary. It was seen that SMEs, operating in a static business environment, experienced a blend of mainly emergent strategy. Companies operating in a complex business environment were shown to be implementing an intended strategy formation process, while companies operating in a dynamic business environment were identified as having a more emergent strategy process.

In conclusion, it was noted that there were differences drawn regarding the company type and the business environment they perceived themselves to be operating in. Large companies tended to be positioned in the upper half of the Business Environment Matrix (Observation 5, section 7.3.1). Hence, they saw themselves as operating in a medium to highly dynamic business environment. SMEs tended (Observation 8, section 7.3.2) to position themselves in the bottom half diagonal of the Business Environment Matrix. Hence, the complexity of the business environment of each SME company tended to be perceived as higher than the dynamics of the business environment.

### **9.3 Research Limitations**

#### **9.3.1 *HiCo Action Research***

The HiCo action research case faced several research limitations. The first limitation was concerned with conducting the research in one company with specific external and internal contexts limiting, to some degree, the ability for generalisation. Although the research was conducted over nineteen months and incorporated to some degrees previous experiences it represented only a specific time frame of the organisation's evolution.

#### **9.3.2 *Sample of Companies***

The researched projections included data collection from seventeen companies, diversified by size, industry and geographical location. The sample of companies is still relatively small to conduct a statistical analysis. However, qualitative description and tentative relationships have been described.

#### **9.3.3 *Qualitative Data***

The projection on the model consisting of the Business Environment Matrix and Strategy Formation Matrix is based on the perception of one or two managers from each company. This perception is based on individuals' assumptions, expectations, knowledge and information about the world of other people and relationships with

them, as well as about the non-social world in which the individual lives and acts (Stacey, 2001). However, as mentioned, in some cases the projection is based on a consensus position between more than one manager. In all cases, the triangulation with other sources of data is conducted and examples are asked. Several sources that did not meet this request were not included in the research findings.

The perceptions of the companies were positioned in a qualitative manner. Managers positioned their company's projection directly on both Matrices. An alternative approach would have been to define parameters for each dimension, quantify output and generate the projection mathematically. However the advantage of direct projection on the Matrix is that you do not risk choosing the wrong parameters or using the wrong weightings. The direct positioning allows further investigation with the interviewed manager and helps to deepen the understanding in real time, where needed.

The accumulated information on the seventeen companies was based on different data collection methods and tools. Some of the perceived projected positions were collected by interview, while others through workshops.

## **9.4 Further Work**

The research findings generate an array of future research opportunities of several types.

### ***9.4.1 Larger Sample***

First, due to the research limitations, several further investigations can help validate the research findings and add more insight into the relationship between the strategy formation process, management role and the business environment. A substantially larger sample of companies, diversified by size, can clarify and validate some of the findings by statistical significance. Other future research, based on the findings, could be to extend the diversification dimension to investigate different relationships in different industries.

### ***9.4.2 Quantitative Validation***

Other aspects to be investigated are to conduct the projection not in a qualitative form but by offering various parameters and weights to quantify the dimensions. The quantification could be based on questionnaires of a large sample of managers and integrated with objective data concerning the business environment and the company performance measurements.

### ***9.4.3 Alternative/ Additional Business Dimensions***

A model based on two dimensions, dynamics and complexity represented the business environment in the research. However other forms might be offered (i.e. number of alternatives versus predictability of outcome) that could complement the findings concerning the relations between the strategy formation, management role and business environment. Furthermore the economic forces leading to the findings concerning the



---

micro as well as the macro implication and the relationship to existing economic theories should be further investigated.

#### ***9.4.4 Longitudinal Study***

While some of the companies in the research were investigated as a snapshot in time, others were investigated in more than one snapshot in a time frame that did not exceed two years. The managers' perspective of past positions in the multiple case study was problematic due to its retrospective nature. A longitudinal study is recommended by researching a company, or set of companies, and their change over time in strategy formation characteristics and the business environment within which the company operates.



## 10 References

- Ambrossini V. and Bowman, C. (2002). Mapping Successful Organizational Routines. In: *Mapping Strategic Knowledge* edited Huff, A.S. and Jenkins, M. SAGE publications. Pages 19-45.
- Andrews, K. R. (1971). *The Concept of Corporate Strategy*. Homewood, Ill. Dow Jones-Irwin. Cited in: Feurer, R. and Chaharbaghi K., (1995) Strategy development: past, present & future. *Management Decision*, Vol. 33, No. 6.
- Ante, S. (2003). The New Blue. *Business Week*, March, Iss. 3824, pg. 80.
- Bannister, P., Burman, E., Parker, I., Taylor, M. and Tindall, C. (1994). *Qualitative Methods in Psychology: A Research Guide*. Open University Press: Buckingham.
- Bartlett, C. and Ghoshal, S. (1997). The myth of the generic manager: New personal competencies for new management roles, *California Management Review*, 40 (1): 92-119.
- Becker, H. and Geer, B. (1982). *Participant Observation: The Analysis of Qualitative Field Data* In: *Field Research: A Sourcebook and Field Manual* edited by R.G Burgess (1982)
- Beer, M. and Eisenstat (2004). How to have an Honest Conversation about Your Business Strategy. *Harvard Business Review*, February 2004.
- Beinhocker, D. (1998). Strategy at the edge of chaos. *The McKinsey Quarterly*, Number 1.

- Beinhocker, D. (2001). Robust Adaptive Strategies. In: Strategic Thinking for the Next Economy, edited by Barry A. Turner. San Francisco: Jossey-Bass, 2001.131-153.
- Benner, M. and Tushman, M. (2003). Exploitation, Exploration, And Process Management: The Productivity Dilemma Revisited. *Academy of Management Review*, vol. 28 No.2. 238-256.
- Bheling O. (1980). The Case for Natural Science Model For research in Organizational Behaviour and Organization Theory. *Academy of Management Review* Vol. 5 No. 4 p.438-490
- Blaikie, Norman (1993) *Approaches to Social Enquiry*, Cambridge: Polity press.
- Bouma, G. and Atkinson, G. (1995). *A Handbook of Social Science Research. A Comprehensive and Practical Guide for Students*, Oxford University Press.
- Brown S. and Eisenhardt K. (1998). *Competing on the Edge: Strategy as Structured Chaos*. Boston: Harvard Business School Press.
- Buchner, H., Krause, S. and Weigand, A. (1998). Turbulenzgerechte Planung: Aktueller Stand in der Praxis und Herausforderung für das Controlling. In: Controller Magazin 6, pp. 451-457.
- Buchner, H., and Weigand, A. (2001). Welche Planung passt zu Ihrem Unternehmen: Empfehlung zur turbulenzgerechten Planung. In: Controlling, Heft 8/9, August/September, pp. 419-428.
- Campbell, A., Goold, M. and Marcus, A. (1995). The Quest for Parenting Advantage. *Harvard Business Review*, March –April.
- Campbell, A., and Luchs, K.S. (1998). *Strategic Synergy*. 3<sup>rd</sup> ed. London: International Thomson Business Press.
- Chakravarthy B. (1997). A New Strategy Framework for coping with Turbulence. *Sloan Management Review*, Winter 1997. pg 69-82.
- Chandler, A.D., Jr, (1962). Strategy and Structure: Concepts in the History of the Industrial Enterprise, MIT Press, Casender, MA. Cited in: Feurer, R. and Chaharbaghi K., (1995) Strategy development: past, present & future *Management Decision*, Vol. 33, No. 6.
- Chesbrough, H. (2002). Making sense of Corporate Venture Capital. *Harvard Business Review*, March 2003. pg 90-99.
- Christensen, C. and Raynor, M. (2003). *The Innovator's Solution: Creating and Sustaining Successful Growth*. Harvard Business School Publishing Cooperation.

- 
- Collins, J. (2001). Level 5 Leadership: The Triumph of Humility and Fierce Resolve. *Harvard Business Review*, January.
- Collins, J. and Porras, J. (1995). *Built to Last*, Tel-Aviv: Pecker Literary Agency.
- Courtney, H., Krickland, J. and Viguerie, P. (1997). Strategy under uncertainty. *Harvard Business Review*, Nov.-Dec.
- De Geus, A. (1997). *The living company: Habits for Survival in a Turbulent Business Environment*. Boston, Massachusetts: Harvard Business School Press.
- Denzin, N. and Lincoln, Y. (eds. 1994). *Handbook of qualitative research*, Thousand Oaks, Sage.
- Dooly, K. (1996). *A complex adaptive systems model of organisational change*. *The Chaos Network*, 8(1), 2-3. In: Olson, E.E and Eoyang, G.H. (2001): Facilitating organisation change: lessons from complexity science. San Francisco: Jossey-Bass/Pfeiffer p.7.
- Duncan, R. (1972). Characteristics of organisational environments and perceived uncertainty. *Administrative science Quarterly*, vol. 17, pp. 313-27. Cited in: Stacey, R.D. (2000) *Strategic Management & Organisational Dynamics: The Challenge of Complexity*, 3rd ed, Pearson Education Limited, England. Pg 87.
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (1991) *Management Research: An Introduction*, Sage, London.
- Eden C and Huxham C. (1996). *Action research for the study of organisations*; in *Handbook of Organisation Studies*, S. Clegg, C. Hardy, and W. Nord (eds). Sage: London.
- Eisenhardt, K. and Sull, D. (2001). Strategy as Simple Rules. *Harvard Business Review*, January: 107-116.
- Eysenck, M. (1998). *Psychology: An Integrated Approach*, Addison Wesley Longman Ltd.
- Ferber, R., Sheatsley, P. and Turner, A. (2000). What Is A Survey? Subcommittee of the Section on Survey Research Methods, American Statistical Association Washington
- Feurer, R. and Chaharbaghi K., (1995). Strategy development: past, present and future. *Management Decision*, Vol. 33, No. 6.
- Fontana, A. and Frey, J. (1994). *Interviewing: the Art of Science*, in: Denzin, N. and Lincoln, Y. (eds. 1994). pg 361.
- Foster, M. (1972). An Introduction to the Theory and Practice of Action Research in Work Organizations. *Human Relations*, Vol. 25, No.6.

- 
- Foster, N. and Kaplan, S. (2001): Creative destruction. *McKinsey Quarterly*. No. 3. p.41-51.
- Foust, D., Jespersen, F., Katzenberg, K., Barrett, A. and Crockett, R. (2003). The Best Performers. *Business Week*, Spring, Iss., 3826A, pg. 34.
- Fowler, F. and Fowler, H. (1984). The Pocket Oxford Dictionary of Current English. Seventh Edition edited by R.E. Allen. Clarendon Press: Oxford.
- Garten, J. (2001). Jack Welch: a Role Model for Today's CEO? *Business Week*, September 10<sup>th</sup>, Iss. 3748, pg. 32.
- Gates, B. and Hemingway, C. (1999). *Business @ the Speed of Thought: Using a Digital Nervous System*. New York: Warner Books, Inc.
- Gilgeous, V. (1995). *Structured Workshops for Improving Manufacturing Effectiveness*, Gower Publishing Limited.
- Gill, J. and Johnson, P. (1991). *Research methods for Managers*, Paul Chapman Publishing.
- Glesne, C. and Peshkin, A. (1992). *Becoming Qualitative Researchers: An Introduction*. Longman: White Plains, NY
- Goold, M. and Campbell, A., (1998). Desperately Seeking Synergy, *Harvard Business Review*, September –October.
- Hamel, G. (2000). *Leading the revolution*. Boston: Harvard Business School press.
- Hamel, G. (2001). Strategy Innovation and the Quest for Value, edited by Barry A. Turner. *MIT Sloan Management Review*. San Francisco: Jossey-Bass, 2001.181-196.
- Hamel, G. and Prahalad, C. (1994). *Competing for the Future: A breakthrough strategy for seizing control of your industry and dominating the markets of tomorrow*. Boston: Harvard Business School.
- Hamel, G. and Valikangas, L. (2003). The Quest for Resilience. *Harvard Business Review*, September.
- Hart, S. (1992). An Integrative Framework for Strategy-Making Processes. *Academy of Management Review*, Vol. 17, No. 2, pp. 327-351.
- Hart, C. (1998). *Doing a Literature Review: Releasing the Social Science Research Imagination*, Sage Publications Ltd.
- Hartly, J. (1994). *Case Studies in Organizational Research*. In; Casell C. and Symon G. (editors) *Qualitative Methods in Organizational Research: A Practical Guide*. Sage.

- 
- Hatch, M. J. (1997). *Organizational Theory: Modern, Symbolic and Postmodern Perspectives*. Oxford: Oxford University Press.
- Holland, J. (1998). *Emergence From Chaos to Order*. Preseus Books.
- Johnson, J. and Scholes, K. (1988). *Exploring Corporate Strategy*, 2<sup>nd</sup> ed. Prentice Hall, New York.
- Kaplan, R.S. and Norton, D.P. (1996). *Balanced Scorecard, Translating Strategy into Action*. Harvard Business School Press, USA.
- Kaplan, R.S. and Norton, D.P. (2000). *The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*. Harvard Business School Press, USA.
- Kaplan, R. and Norton, D. (2004). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Harvard Business School Press, USA.
- Kauffman, S. (1995a). *At Home in the Universe*. Oxford University Press.
- Kauffman, S. (1995b). Escaping the Red Queen Effect. *The McKinsey Quarterly*, Number 1, pg. 118- 129.
- Kripalani, M. and Einhorn, B. (2003). Global Designs for India's Tech King. *Business Week*, October, Issue. 3853, pg. 56.
- Krueger, R. and Casey, M. (2000). *Focus Groups: A Practical Guide for Applied Research: A Practical Guide for Applied Research*, Sage Publications Ltd.
- Lengnick-Hall, C. and Wolff, J. (1999). Similarities and contradictions in the core logic of three strategy research streams. *Strategic Management Journal*, 20, 1109-1132.
- Lettice, F. (1996). *Concurrent Engineering: A Team-Based Approach to Rapid Implementation*. Ph.D. Thesis, Cranfield University.
- Levy, D. (1994). Chaos Theory and Strategy: Theory, application and managerial implications. *Strategic Management Journal*, Vol. 15, pg. 167-178.
- Lewin, R. and Regine, B. (2003). The Core of Adaptive Organisations. In: *Complex systems and Evolutionary Perspectives on Organisations – the application of Complexity Theory to Organisations*, edited by Mitleton-Kelly, E. London: Pergamon. Page 167 –183.
- Lincoln, Y. and Guba, E. (1985). *Naturalistic Enquiry*. Sage: Beverly Hills
- Lissack, M.R. (1999). *Complexity and Management: it is More than Jargon* In: Lissack, R. and Gunz, H. P. (editors) *Managing Complexity in Organizations: A View in Many Directions*, London: Quorum Books, 1999.

- 
- Luehrman, T. (1998). Strategy as a Portfolio of Real Options. *Harvard Business Review*, September - October 1998.
- MacLean, D. and MacIntosh, R. (2003) Complex Adaptive Social Systems: Towards a Theory for Practice. In: *Complex systems and Evolutionary Perspectives on Organisations – the application of Complexity Theory to Organisations*, edited by Mitleton-Kelly, E.. London: Pergamon. Page 149 -165.
- Mahon, C. (1999). *Charting Complexity: Analysing how strategy emerges in organisations*. Copenhagen: New Social Science Monographs.
- March, G. (1991). Exploration and Exploitation in Organizational Learning., *Organisational Science*, Vol.2, No.1, February 1991, p.71-87.
- McGahan A. and Porter, M. (1997). How much does industry matter, really? *Strategic Management Journal*, Vol. 18 (summer special issue), pg 15-30.
- Micalizzi, A. and Trigeorgis, L. (1999). Project evaluation, Strategy and Real options. In: *Real Options and Business Strategy*, edited by Trigeorgis, L. London: Risk Books a division of Risk Publications. Page 1 –19.
- Miles, M. B. and Huberman, A. M. (1994). *Qualitative Data Analysis*, 2<sup>nd</sup> eds., Sage Publications.
- Miller, D. (1996). Configurations Revisited. *Strategic Management Journal*. Vol. 17, pp. 505-512.
- Mitleton-Kelly, E (2003). Ten Principles of Complexity and Enabling Infrastructures. In: *Complex systems and Evolutionary Perspectives on Organisations – the application of Complexity Theory to Organisations*, edited by Mitleton-Kelly, E.. London: Pergamon. Page 23 -50
- Mintzberg, H. (1987). The Strategy Concept 1: Five Ps for Strategy. *California Management Review*, Fall.
- Mintzberg, H. (1990). The design school: reconsidering the basic premises of strategic management. *Strategic Management Journal*, 11:171-95.
- Mintzberg, H. (1994). *The Rise and Fall of Strategic Planning*, Prentice Hall International (UK) Limited.
- Mintzberg, H., Ahstrand, B. and Lampel, J. (1998). *Strategy safari: a guided tour through the wilds of strategy*. New York: The Free Press.
- Mintzberg, H. and Lampel, J. (2001). Reflecting on the Strategy Process. In *Strategic Thinking for the Next Economy*, edited by Barry A. Turner. San Francisco: Jossey-Bass, 2001.33-54.
- Nalebuff B. and Brandenburger A. (1997). *Co-opetition*. London: Profile Books



- 
- Newman, W. (1951). *Administrative Action: The Techniques of Organization and Management*. Englewood Cliffs, NJ; Prentice Hall.
- Olson, E. and Eoyang, G. (2001). *Facilitating Organisation Change: Lessons from Complexity Science*. San Francisco: Jossey-Bass/Pfeiffer.
- Patton, M. (1990). *Qualitative Evaluation and Research Methods*, Sage Publications.
- Porter, M.E. (1980). *Competitive Strategy: Techniques for Analysing Industries and Competitors*. New York: Free Press.
- Porter, M.E. (1996). What is Strategy? *Harvard Business Review*, November - December.
- Prahalad, C. and Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, May/June 1990, Vol. 68 Issue 3, p. 79-90.
- Rapoport, A. (1970). Three Dilemmas in Action Research. *Human Relations*, 23, pg 499-513.
- Robson, C. (1993). *Real World Research. A Resource for Social Scientists and Practitioner Researchers*, Blackwell Publishers,
- Schein, E. (1989). *The Clinical Perspective in Fieldwork California USA*, SAGE.
- Scruton, R. (1997). *Modern Philosophy*. London: Arrow. In: MacLean, D. and MacIntosh, R. (2003) *Complex Adaptive Social Systems: Towards a Theory for Practice*. In: *Complex systems and Evolutionary Perspectives on Organisations – the application of Complexity Theory to Organisations*, edited by Mitleton-Kelly, E. London: Pergamon. Page 149 -165.
- Silverman, D. (2000). *Doing Qualitative Research: A practical Handbook*, Sage Publications Ltd.
- Segev, E. (1995). *Corporate Strategy: Portfolio Models*. London: International Thomson Publishing.
- Stacey, R. (2000). *Strategic Management & Organisational Dynamics: The Challenge of Complexity, 3rd ed*, Pearson Education Limited, England.
- Stacey, R. (2001). *Complex responsive process in organizations: learning and knowledge creation*, London: Routledge.
- Stern, W. and Stalk G. (1998). *Perspectives on Strategy from the Boston Consulting Group* N.Y.: John Wiley & Sons, Inc.
- Strauss, A. and Corbin, J. (1990). *Basics of qualitative research: grounded theory procedures and techniques*, Sage Publications.

- 
- Strauss, A. and Corbin, J. (1998). *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*, Sage Publications.
- Streatfield, P. (2001). *The Paradox of Control in Organisations*. London: Routledge.
- The Financial Times Limited - February 2003
- Thompson, J. and Tuden, A. (1959). *Comparative Studies in Administration*, Pittsburgh: University of Pittsburgh Press. In: Stacey, R.D. (2000) *Strategic Management & Organisational Dynamics: The Challenge of Complexity*, 3rd ed, Pearson Education Limited, England.
- Waldrop, M.M. (1992). *Complexity: the emerging science at the edge of order and chaos*, New York: Touchstone.
- Weick, K. (2000). *Making Sense of the Organization*. Blackwell Publishers.
- Weick, K. and Sutcliffe, M. (2001). *Managing the Unexpected*. San Francisco: Jossey-Bass a Wiley Company.
- Wolcott, H. (ed. 1990). *Writing Up Qualitative Research (Qualitative Research Methods)*, Sage Publications (USA).
- Wood, R. (1999). The Future of Strategy: The Role of the New Science. In: *Managing Complexity in Organisations: A View in Many Directions*, edited by Lissack, R. & Gunz, H. P. London: Quorum Books. Page 5, 118 –164.
- Yin, R. (eds. 1989). *Case Study Research Design and Methods*, Sage Publications, London.
- Yin, R. (1994). *Case Study Research Design and Methods*. 2<sup>nd</sup> ed, SAGE Publications.
- Zikmund, W. (1991). *Business Research Methods*, Dryden Press, USA.
- Zimmerman, B. (2000) Edgware – Primer.  
[http://www.plexusinstitute.org/edgware/archive/think/main\\_prime5.html](http://www.plexusinstitute.org/edgware/archive/think/main_prime5.html),  
 Schulich School of Business, York University, Toronto, Canada.
- Zohar, D. (1997). *Rewiring the Corporate Brain: using New Science To Rethink How we Structure and Lead Organizations*. San Francisco: Berrett -Koehler Publishers, Inc.

# Appendix A - Action Research in HiCo – Chronological Diary

The following table includes a chronological diary of **substantial** events, data collection and themes recorded by the author between 8/2002 and 2/2004 (19 months). Most of the events mentioned include various preliminary work meetings with managers at all levels, which are not presented. All meetings and dates are recorded on the calendar Software used by the author.

Since the aim of the table was to serve as a working tool to the author, the themes are mentioned as key words to remind the author of interesting findings in each event.

The 8/2002 marks the beginning of the action research based on literature on the essence of action research and the recommended data collection process. In several cases some of the events mentioned and analysed in the thesis are prior to this date. They are presented to represent a unique case or to serve as a benchmark to an activity in a later phase in the action research.

HiCo consists of several, SBU's, RBU's and subsidiaries. The SBU's (strategic businesses units) are in charge of marketing, R&D, production, customer support and overall sales. The RBU's (Regional Business Units) are located in various regions around the world and are in charge of the direct contact with the customers and local sales. The corporate manages of the SBU's and RBU's, define the overall strategy and resource allocation and provide various services.

Date	Level	Event	Description	Data Collection	Themes
2/2002	SBU A	Balanced Scorecard workshop with management	<p>One (2 hr) workshop meeting defining the goals</p> <p>One (2 hr) meeting with SBU CEO setting measurements and targets for 2002</p> <p>SBU Management meeting to approve goals</p>	<p>Templates used, Presentation of output</p> <p>+ Notes</p>	<ul style="list-style-type: none"> <li>• Dependency on external support</li> <li>• Short tem vs. long term</li> <li>• Employee motivation</li> <li>• Different perspectives on priorities</li> </ul>
2/2002	SBU D	BSC workshop with COO and CEO	<p>One (2 hr) workshop meeting defining the goals</p> <p>One (2 hr) meeting with SBU CEO setting measurements and targets for 2002</p>	<p>Templates used, Presentation of output</p> <p>+ Notes</p>	<ul style="list-style-type: none"> <li>• Sustainability (Old product as cash cow for new, strive to survive as unit)</li> <li>• SBU/Corporate relations</li> </ul>
2/2002	Corporate	BSC workshop with management	<p>One (2 hr) workshop meeting defining the goals</p> <p>One (2 hr) meeting with SBU CEO setting measurements and targets for 2002</p>	<p>Templates used, Presentation of output</p> <p>+ Notes</p>	<ul style="list-style-type: none"> <li>• Portfolio aspects</li> <li>• Responsibility on cross company issues</li> <li>• Short term long term</li> </ul>


02-06 /2002	SBU A	Strategy formation process	Cross company process containing two-stage approach. Stage one – 14 geographical strategy analysis groups, 3 segment analysis groups, 5-overview subjects analysis. Strategy formation.  Stage 2 : Integration (Geography/segment), business model and resource allocation model	No recording of interviews.  Templates used, Presentation of output + Notes	<ul style="list-style-type: none"> <li>• Linear process</li> <li>• How slight change in prediction assumptions could have massive impact on results</li> <li>• Communication of strategy internally vs. externally</li> <li>• Strategy outcome used for promoting organisational changes</li> </ul>
6/2002	Corporate	Incentive plan formulation	Support defining plan guidelines	<i>Strictly Confidential</i>	<ul style="list-style-type: none"> <li>• Overcoming problematic scoring system to overcome stakeholders conflicting interests (Scoring based on several levels)</li> </ul>
8/2002	SBU C	BSC workshop with management	One (2 hr) meeting setting goals  One (2 hr) meeting defining measurements  Two private meetings with SBU CEO	Templates used, Presentation of output + Notes	<ul style="list-style-type: none"> <li>• Long term planning effectiveness</li> <li>• Stakeholders politics (between management SBU / corporate, SBU/RBU)</li> <li>• BSC strengths and weaknesses</li> <li>• Networking</li> </ul>

8/2002	RBU A	Meeting with RBU Manager	1 hr meeting on the need to define goals and measurements	Notes	<ul style="list-style-type: none"> <li>Stakeholders politics (between management SBU / corporate, SBU/RBU)</li> <li>Alignment of strategies between division and corporate</li> <li>The use of goals and plans to communicate</li> <li>Internal customer/supplier relationships</li> <li>Compensation</li> <li>Budget constraints</li> </ul>
9/2002	SBU A / Corporate / RBU	Meeting on setting various goals and compensation	Corporate VC Budget and Control, SBU A VC Sales – 2 hours on changes needed to support strategy	Notes, Original plan derived from strategic plan	<ul style="list-style-type: none"> <li>Budget Constraints – middle of the year</li> <li>Contract constraints</li> <li>Problems Implementing strategy</li> <li>The one measurement optimising problem (turnover)</li> </ul>
9/2002	SBU A	Out of the box Brainstorming workshop	Full day, SBU management + RBU managers	Templates used, Presentation of ideas and conclusions, notes, pictures	<ul style="list-style-type: none"> <li>Stakeholders politics (between management SBU / corporate, SBU/RBU)</li> <li>Types of Opportunities</li> <li>Exploitation / Exploration</li> <li>Process / reorganisation</li> </ul>

					<ul style="list-style-type: none"> <li>• The search for magic opportunity</li> </ul>
10/2002	SBU A	Presentation of Marketing Strategy Plan	2 Hours	Presentation, notes	<ul style="list-style-type: none"> <li>• Long term planning effectiveness</li> <li>• Implementation problems</li> <li>• High level vs Middle management perception and trust</li> </ul>
10/2002	Corporate	Corporate Risk management Plan	Preparation with CEO Assistant Presentation to Board Audit committee	Presentation, notes	<ul style="list-style-type: none"> <li>• Opportunities vs Risks</li> <li>• World trend after Enron</li> <li>• Unexpected events with large impacts makes long term planning problematic</li> </ul>
10/2002	SBU A	Business Development Unit Workshop	Full day work shop with BD Team (6 people) on alliances	Background material, notes	<ul style="list-style-type: none"> <li>• Types of alliances</li> <li>• Trust</li> <li>• Conflicting interest between partners</li> <li>• Conflicting interest between internal units</li> <li>• BD and Strategy</li> <li>• Personal relationships</li> <li>• Leveraging opportunities</li> <li>• The unexpected emergence of the JV that turned out to be 30% of revenues</li> </ul>
11-12	SBU A	Specific Segment	Several meetings with	Analysis, Notes	<ul style="list-style-type: none"> <li>• Politics / Interests between</li> </ul>

/2002		Strategic plan	marketing and Sales middle managers  Interview on past pattern of emergence with M  The process was stopped half way		marketing and Sales <ul style="list-style-type: none"> <li>• Middle manager characteristics has major influence on strategy implementation</li> <li>• Sale support for efficient penetration</li> <li>• The story of a dreamer that insisted and eventually got the company a new market segment (40% of sales)</li> </ul>
12/2002	Corporate SBU	Strategy Forum preparation meetings	Discussion on strategy formation process needed, expectations etc.  Meeting with VC SBU A (Form Chairman), CTO	Presentations, document stating the forum given goals  Notes	<ul style="list-style-type: none"> <li>• Different perceptions of definition of strategy</li> <li>• Different stakeholders interest from the forum</li> <li>• Problematic empowerment of forum</li> </ul>
12/2002	SBU C	SBU market analysis for Strategy workshop	2 hours with SBU management to fill templates for the strategy forum	Templates, presentations, notes	<ul style="list-style-type: none"> <li>• Internal Uncertainties as high as external</li> <li>• How will inputs from SBU be perceived / signalling to others</li> <li>• Effectiveness of SWOT analysis</li> </ul>
12/2002	Corporate	Strategy forum meeting 1	2 hours presentation of SBU + CTO current market/strategy analysis	Templates, presentations, notes	<ul style="list-style-type: none"> <li>• Different perceived market trends</li> <li>• Uncertainties</li> <li>• Need for common language</li> </ul>
12/2002	Corporate	CTO Interview on	Discussion on strategy	Notes	<ul style="list-style-type: none"> <li>• Emerging process</li> </ul>




		strategy formation	formation, complexity concepts, patterns of emergence in HiCo and life		<ul style="list-style-type: none"> <li>• Synergy</li> <li>• Exploration and Exploitation</li> <li>• Examples of emerging products</li> </ul>
12/2002	Corporate	Strategy forum meeting 2	2 hours discussion on expectations and process	Author presentation on suggested process, final outcome, notes	<ul style="list-style-type: none"> <li>• Intended,, Emergent, realized strategy</li> <li>• Need for new voices</li> <li>• Complexity concepts</li> <li>• Diversified team</li> <li>• Bottom up inputs</li> <li>• SWOT with major emphasis on opportunities</li> </ul>
12/2002	SBU A	Business Opportunities Brainstorming Workshop 	3 hours, Brainstorming to generate various opportunities and later quantify them through group discussion	Templates, Workshop process, Output presentation, Notes, pictures	<ul style="list-style-type: none"> <li>• Opportunity Sources</li> <li>• Resource allocation</li> <li>• Current Business vs New opportunities</li> <li>• Group dynamic in quantifying opportunities</li> </ul>
12/2002	SBU C	Business Opportunities Brainstorming	3 hours, Brainstorming to generate various opportunities and later	Templates, Workshop process, Output presentation, Notes, Pictures	<ul style="list-style-type: none"> <li>• Opportunity Sources</li> <li>• Resource allocation</li> <li>• Current Business vs New</li> </ul>

		Workshop	quantify them through group discussion		opportunities <ul style="list-style-type: none"> <li>Group dynamic in quantifying opportunities</li> </ul>
12/2002	Corporate	Strategy forum meeting 3	2 hours presentation RBU/SBU SWOTs Emphasis on opportunities	Templates, presentations, notes	<ul style="list-style-type: none"> <li>RBU / SBU conflicts</li> <li>Different perceived company position</li> <li>Use of forum for politics</li> </ul>
01/2003	Corporate	Strategy forum meeting 4	2 hours, Brainstorming to generate various opportunities and later quantify them through group discussion	Templates, Workshop process, Output presentation, Notes	<ul style="list-style-type: none"> <li>Opportunity Sources</li> <li>Resource allocation</li> <li>Current Business vs New opportunities</li> <li>Group dynamic in quantifying opportunities</li> </ul>
01/2003	Corporate	Cross company Team -Business Opportunities Brainstorming Workshop	Meeting One – 2 Hr getting to Know. Meeting Two – Brainstorming on corporate level opportunities by splitting to small diversified teams	Templates, Workshop process, Output presentation, Notes	<ul style="list-style-type: none"> <li>Level of politics in middle management vs. top management</li> <li>Motivation to work together</li> <li>Call for changes</li> </ul>
01/2003	Corporate	Strategy forum meeting 5	2 hours, workshop on synergy between units	Templates, Workshop process, Output presentation,	<ul style="list-style-type: none"> <li>Stakeholders interests</li> <li>Shared Know-How</li> </ul>


				Notes	<ul style="list-style-type: none"> <li>• Shared Tangible Resources</li> <li>• Vertical integration</li> <li>• Pooled Negotiating power</li> <li>• Combined Business Creation</li> <li>• Coordinated Strategies</li> <li>• Corporate vs SBU/Business strategy</li> <li>•</li> </ul>
01/2003	Corporate	Strategy forum meeting 6	Presentation and discussion of diversified cross company team outputs and Strategy form members	Output presentation, Notes	<ul style="list-style-type: none"> <li>• Interaction of top with middle / low managers</li> <li>•</li> </ul>
01/2003	Corporate	Strategy forum meeting 7	Presentation and discussion of SBU customer's analysis (Type, Geography etc.) 2002 / future trend	Templates, Output presentation, Notes	<ul style="list-style-type: none"> <li>• Current customer base vs future</li> <li>• Easier to analyse the past then the future</li> </ul>
02/2003	Corporate	Strategy forum meeting 8	Presentation and discussion of SBU customer's analysis (Type, Geography etc.) 2002 / future	Templates, Output presentation, Notes	<ul style="list-style-type: none"> <li>• Current customer base vs future</li> <li>• Easier to analyse the past then the future</li> </ul>

			trend		
02/2003	Corporate	CEO Assistant New version to BSC	Assistance in defining corporate goals	Presentation, Notes, summary output	<ul style="list-style-type: none"> <li>• Short term vs Long term</li> <li>• Enabler</li> <li>• Exploitation vs exploration</li> <li>• Compensation</li> </ul>
02/2003	Corporate SBU	Strategy forum sub team meeting	Between Centre and SBU on “Parenting role”	Notes, summary output	<ul style="list-style-type: none"> <li>• Current customer base vs future</li> <li>• Easier to analyse the past then the future</li> <li>• Stakeholders dynamic</li> <li>• Conflict interests</li> <li>• Different perception of roles</li> <li>• Patterns and History</li> </ul>
02/2003	Corporate	Strategy forum meeting 9	Presentation and discussion of future business arenas, opportunities clustering	Templates, Output presentation, Notes	<ul style="list-style-type: none"> <li>• Prioritising and clustering opportunities</li> <li>• Exploration vs Exploitation</li> <li>• Resource allocation</li> <li>• Alignment to strategy</li> </ul>
02/2003	Corporate	Board Meeting Q4/2002	Presentation of forum phase 1 outputs (Author not present)	Presentation, Notes	<ul style="list-style-type: none"> <li>• Stack holders politics</li> <li>• Empowerment issues</li> <li>• Turbulence of environment</li> </ul>

02/2003	SBU A	BSC workshop with management	2hr meeting setting goals and defining measurements	Templates used, Presentation of output + Notes	<ul style="list-style-type: none"> <li>• Long term planning effectiveness</li> <li>• Motivation and incentives</li> <li>• Stakeholders politics (between management SBU / corporate, SBU/RBU)</li> <li>• BSC strengths and weaknesses</li> <li>• Networking</li> </ul>
03/2003	Corporate	Strategy forum meeting 10	Technology mapping	Output presentation, Notes	<ul style="list-style-type: none"> <li>• Search for common language</li> <li>• Is a map setting a box</li> <li>• Is shared technology resource possible (cost vs flexibility)</li> <li>• Search for gaps and JV</li> <li>• Core technology</li> <li>• Emergent strategy</li> </ul>
03/2003	Corporate Marketing	Assistant in building Marketing strategy	Platinum, Gold and regular customers (parallel effort to strategy forum)	Draft Output	<ul style="list-style-type: none"> <li>• Internal politics</li> <li>• Various non aligned strategies</li> <li>• Resource allocations</li> <li>• Short term vs long term</li> <li>• Focus vs opportunistic</li> </ul>
03/2003	Corporate	Meeting with CTO	Discussion on	Notes	<ul style="list-style-type: none"> <li>• Forecasting</li> </ul>

	SBU		forecasting, formal vs non formal innovation, bottom up innovation (example),		<ul style="list-style-type: none"> <li>• Formal vs non formal innovation</li> <li>• Bottom up innovation (example)</li> <li>• Garbing opportunities</li> </ul>
03/2003	Corporate	Strategy forum meeting 11	Technology mapping Cont.	Output presentation, Notes	<ul style="list-style-type: none"> <li>• Uncertainties</li> <li>• Scope of strategy plan (time)</li> <li>• Resource allocation</li> <li>• Internal politics</li> </ul>
03/2003	Corporate	Strategy forum meeting 12	Alternative business models and positioning	Output presentation, Notes	<ul style="list-style-type: none"> <li>• Positing</li> <li>• Concessions (major stockholder missing)</li> </ul>
04/2003	Corporate Business Development	Out of the Box initiative 	Mapping and clustering of out of SBU scope opportunities	Output Notes	<ul style="list-style-type: none"> <li>• Competing initiative</li> <li>• Stakeholders politics</li> <li>• Exploration vs exploitation</li> <li>• Networking</li> </ul>
04/2003	Corporate	Strategy forum meeting 13	Planned limited participation (SBUs)	Output presentation, Notes	<ul style="list-style-type: none"> <li>• SBU vs Corporate</li> <li>• How far can you go</li> <li>• Strategy as common interests</li> </ul>
05/2003	Corporate	Board Meeting Q1/2003	Presentation of forum phase 2 outputs	Presentation, Notes	<ul style="list-style-type: none"> <li>• Stack holders politics</li> <li>• Empowerment issues</li> </ul>

			(Author not present)		<ul style="list-style-type: none"> <li>• Turbulence of environment</li> </ul>
05/2003	SBU A	China Business Plan preparation	Preparation of 5 years BP	Templates used, Presentation + Notes	<ul style="list-style-type: none"> <li>• Long term planning effectiveness</li> <li>• Stakeholders politics (between management SBU / corporate, SBU/RBU)</li> <li>• Turbulence (SARS)</li> <li>• Networking</li> <li>• BP as story telling</li> </ul>
06/2003	Corporate	Strategy forum meeting 14	Discussion on board meeting	Notes	<ul style="list-style-type: none"> <li>• Patches</li> <li>• Autonomous units</li> </ul>
08/2003	Corporate	Strategy forum meeting 15	Discussion on board meeting Q2/2003 is there still need for the forum?	Notes	<ul style="list-style-type: none"> <li>• Strategy formation process never “die” they just “fade away”</li> </ul>
10/2003	SBU A	Business plan presentation to SBU Management	Business plan Preparation (2004 – 2008) with sales and marketing manager	Business plan, Presentation	<ul style="list-style-type: none"> <li>• Long term predictions process presents problems and trends</li> <li>• Generating in short time a long term prediction incorporates intuition and assumptions with a probability that a longer and more intensive process will generate the same outcomes</li> <li>• Politics in how to present the plan</li> </ul>

					<ul style="list-style-type: none"> <li>Numbers on papers looks convincing even to those that know how they were truly generated</li> </ul>
10/2003	SBU A	Discussion on strategy landscape	Discussion with marketing product development manager	Notes	<ul style="list-style-type: none"> <li>Exploration and exploitation on the strategy landscape</li> <li>Size of spread vs. resources</li> <li>Strategy formation process how to launch, effect of stakeholders</li> </ul>
11/2003	SBU B	Implementing performance measurements to R&D	Work meeting with SW manager of SBU B	Risk management status, data base of measurements and reports, notes	<ul style="list-style-type: none"> <li>Outsider who came to the company has trouble changing company culture</li> <li>Measurements and status reports lets a manger empower more his employees</li> <li>Control vs. non control</li> </ul>
12/2004	Central service unit	Strategy landscape workshop 	A self developed workshop incorporating Woods (98) definition of strategy + turbulence +opportunity and business patterns	Documented process + notes	<ul style="list-style-type: none"> <li>Strategy landscape generating</li> <li>Exploration / Exploitation</li> <li>Spread of resources vs strategy spread on landscape</li> <li>Importance of flexible business process</li> <li>Turbulence</li> </ul>
01/2004	SBU A	Update of China BP	Meeting with manger in charge china	BP, Notes	<ul style="list-style-type: none"> <li>Stakeholders internal effect</li> </ul>



		BP	operation		<ul style="list-style-type: none"> <li>Alliances</li> </ul>
01/2004	SBU A	Project A risk management workshop	Marketing and R&D risks of the project, preparation + workshop with cross company diversified team	Filled templates, summary ,notes	<ul style="list-style-type: none"> <li>Effects of interests and culture of different past pre merger companies managers</li> <li>The power of middle manager to informally stop project process</li> </ul>
01/2004	SBU B	Project B risk management workshop	Marketing and R&D risks of the project, preparation + workshop with cross company diversified team	Filled templates, summary, notes	<ul style="list-style-type: none"> <li>Tense relationships between departments</li> <li>On going back and forth shifting of resources</li> <li>Constant changes in requirements</li> <li>Gambling on future technologies</li> </ul>
02/2004	SBU A	Complexity large cross company event	Large (180) cross company two days workshop outside the company premises – did not attend	Output material, interviews with various stockholders before and after	<ul style="list-style-type: none"> <li>Emergent of ideas in an “open space” event</li> <li>Different perspective of results</li> <li>Day after effect</li> <li>Employee empowerment</li> </ul>
02/2004	SBU A	Gross margin improvement	Half day event with management concluding a cross company process of several months	Documents, notes	<ul style="list-style-type: none"> <li>Hard to predict effect of cost reduction initiatives</li> <li>Compensation of sales man effect on margins</li> <li>Long term vs short term view of</li> </ul>

					stakeholders
02/2004	Corporate	Work meeting on Goals and compensation	Periodical meeting with CEO assistance concerning 2004 Targets and competence plan	Notes	<ul style="list-style-type: none"> <li>• Unpredictable market turnaround effect on compensation and goals</li> <li>• Long term vs short in compensation</li> <li>• Scenario building integrated with goals to deal with uncertainty</li> </ul>

# **Appendix B - Organisational Change Framework - Questionnaire**

## **QUESTIONNAIRE**

From Olson and Eoyang (2001, xli-xlvii)

Instructions:

- Select the one or two best answers to each question below. If all choices are equally appealing, leave the item blank.
- Darken the circle(s) to indicate which answers(s) you chose.
- When you complete all questions, count the number of a's, b's, c's, d's you selected.
- Record the numbers in the "totals" boxes at the end of each page. Then add all together and complete the profile on page XX.

	a	b	c	d
1. When I contract a new client, I: <ul style="list-style-type: none"> <li>a. Guarantee specific outcomes.</li> <li>b. Shape client's expectations for outcomes.</li> <li>c. Indicate what I expect as outcomes.</li> <li>d. Acknowledge that the outcomes will emerge over the span of the project.</li> </ul>	○	○	○	○
2. When I begin a new project, I: <ul style="list-style-type: none"> <li>a. Follow a clear step-by-step process.</li> <li>b. Begin with a clear plan, but am willing to change over time.</li> <li>c. Begin with a plan, but expect change</li> <li>d. Plan a first step and plan subsequent steps as I collect more information.</li> </ul>	○	○	○	○
3. My intervention processes and procedures: <ul style="list-style-type: none"> <li>a. Never Vary.</li> <li>b. Are standards, but I make customised changes.</li> <li>c. Usually follow similar patterns.</li> <li>d. Are designed to meet the unique needs of each client.</li> </ul>	○	○	○	○

4. I believe that I can predict the reaction of client organisation: a. All the time. b. Most of the time. c. Sometimes. d. Never.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. When I plan intervention, I collect information from: a. Top Management. b. All Management. c. Key personal in selected departments. d. All levels across the organisations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Individuals in the organisation should be valued for: a. Compliance with rules. b. Honesty about sources of success and failure c. Increasing their level of competence. d. Creating patterns.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I prefer to begin my interventions: a. At the top of the organisation. b. With a key decision maker. c. Where there is the most need for change. d. At any organisational level with any group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. A team is empowered by: a. A strong leader. b. Member interactions. c. Alliances with others. d. Autonomous individuals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. In effective organisations, decisions are based on: a. Individual preferences. b. Team/unit consensus. c. Team/unit rules. d. Cumulative experience of individuals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

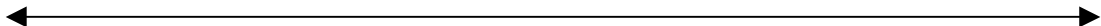
10. As a facilitator of change in an organisation, I:	○	○	○	○
a. Give an expert advice on organisational change.				
b. Hold a mirror up to the organisation.				
c. Share insights about the organisation's pattern behaviour.				
d. Learn and teach.				
11. An effective change facilitator should be able to:	○	○	○	○
a. Squeeze ambiguity out of a system.				
b. Explain why there is ambiguity in the system.				
c. Help people feel comfortable with ambiguous situations.				
d. Use uncertainty and ambiguity to increase organisational capacity.				
12. I collect information about the success of an intervention:	○	○	○	○
a. Only if the customer insists on it.				
b. At the end to provide a final report for the client.				
c. At the beginning, middle, and end.				
d. During every interaction with the organisation.				
13. When I observe the organisation I look for:	○	○	○	○
a. Roles that individual play.				
b. Power relation				
c. Personal interactions.				
d. Patterns of behaviour across the organisation.				
14. A major factor in increasing the speed of change in an organisation is:	○	○	○	○
a. Competitive energy.				
b. Collaboration.				
c. Mutual respect and trust.				
d. Learning about the process of change.				

<p>15. When you are facilitating organisation change, you should begin with:</p> <ul style="list-style-type: none"> <li>a. The task that is most critical to the top managers.</li> <li>b. The simplest issues, so the group will build confidence over time.</li> <li>c. Actions most likely to succeed.</li> <li>d. The issues that that are most accessible.</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>16. Organisation history is important because:</p> <ul style="list-style-type: none"> <li>a. It predicts the future.</li> <li>b. It gives information about potential resistance.</li> <li>c. It provides stories to use in encouraging change.</li> <li>d. It builds the capacity for future actions.</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>17. Differences in an organisation:</p> <ul style="list-style-type: none"> <li>a. Distract from the focus of the work.</li> <li>b. Provide variety in problem identification and solving processes.</li> <li>c. Keep people engaged and interested.</li> <li>d. Provide the impetus for transformation.</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>18. A highly functioning organisation:</p> <ul style="list-style-type: none"> <li>a. Meets a set of pre-defined criteria.</li> <li>b. Reflects the vision of its CEO.</li> <li>c. Satisfies the needs of all its internal and external stakeholders.</li> <li>d. Fits into the niche formed by customers, competitors, and resources.</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>19. Change in the organisation is like:</p> <ul style="list-style-type: none"> <li>a. Tuning a machine.</li> <li>b. Freezing and unfreezing.</li> <li>c. Growth through developmental stages.</li> <li>d. Perpetual evolution.</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>20. I am a successful facilitator of change because:</p> <ul style="list-style-type: none"> <li>a. Know what will happen before it happens.</li> <li>b. Provide processes that are predictable.</li> <li>c. Am flexible in the face of adversity.</li> <li>d. Work with the patterns in the system.</li> </ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grand Totals				
--------------	--	--	--	--

**PROFILE:**

Scoring instructions: In the table below, circle the number of responses you have in each category. Darken the space level you marked. The columns that result are the profile of your Organisational Change Framework.

a	b	c	d
20	20	20	20
19	19	19	19
18	18	18	18
17	17	17	17
16	16	16	16
15	15	15	15
14	14	14	14
13	13	13	13
12	12	12	12
11	11	11	11
10	10	10	10
9	9	9	9
8	8	8	8
7	7	7	7
6	6	6	6
5	5	5	5
4	4	4	4
3	3	3	3
2	2	2	2
1	1	1	1
0	0	0	0
Traditional Change facilitation perspective			Complex adaptive system change perspective
			



**INTERPRETATION:**

- There is no “best” profile. The approach of a change agent must fit the expectations and needs of the client systems. The behaviour listed in any of the alternatives, “a” through “d”, may be appropriate, depending on the situation.
- If your scores in the “a” and/or “b” columns are higher than your scores in the “c” and “d” columns, you may approach your work with a belief that organisation change is best accomplished by, clear, predictable means, using influences and position power to make change happen. This may be very appropriate if control is needed to capitalise on what is working well in a particular situation.
- Columns “c” and “d” represent a complex adaptive perspective about organisation change. This perspective is important for an organisational unit when it needs to be flexible and creative. A score in column change involve complex adaptive behaviour. However, a high score in Column “d” may not equate to conscious expertise in complexity.

**AUTHOR SELF ANALYSIS**

	Strategy formation process SBU A 2002	Strategy formation process Corporate 2003
1	b	d
2	b	c
3	c	d
4	c	c
5	b	c
6	b	c
7	b	c
8	b	b
9	b	c
10	a	a
11	b	c
12	c	d
13	a	a
14	c	d
15	b	b
16	a	c
17	b	b
18	b	b
19	d	c
20	a	c
Count "a"	4	2
Count "b"	11	4
Count "c"	4	10
Count "d"	1	4
Count "a"+"b"	15	6
Count "c"+"d"	5	14



## Appendix C - Initial Background Survey – July, 2002

The questionnaire was formed on June 2002 and distributed on July 2002. Several interactions that included follow-ups and further explanations were conducted in August – September 2002. All forms (except L5, M3) were returned by October 2002. L5 was collected in April 2003. The form was not collected for M3 however alternative sources such as the context analysis provided most of the background information.

The contact person in each company gathered inputs after consulting with various managers.

### 1. History/Background of the company

- *How your company started.*
- *Milestones.*
- *Please insert photos of your company – exterior look and work places.*

### 2. Products and services

- *Please insert photos.*

### 3. Market description, trends, challenges and competitors.

### 4. The context of your company (number of employees etc.).

- *And some other detail that seems important, like for example the employee profile.*

*Identify any important alliances/network with other companies.*

*What is your position in the supply chain (in relation to the end user of your product/service).*

5. Vision

*What the company sees in the future, and how the company sees it self in that future.*

6. How is business development done today and by what functions of the organisation?

7. What are the Business development main future challenges?

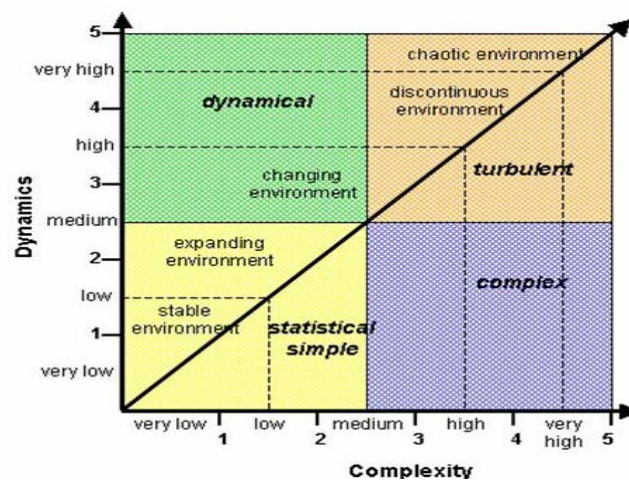
8. Description of strategy formulation/ Investment decision process.

# Appendix D - MENI Questionnaire for Interviews

## WARM UP QUESTIONS

Turbulence

Questioned to: all GPs



- Give an explanation about the turbulence matrix.
- Question them about their position within the matrix (now and in future).
- From which external areas does turbulence arise for their company?
- What are the main indicators for a high level of turbulence in these environments?

### SPECIFIC QUESTIONS REFERRING TO CERTAIN TOPICS

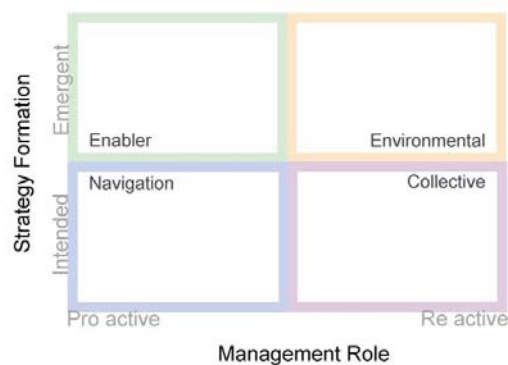
#### Business Development

Questioned to: all GPs

- Ask them if they have any special processes or methods to deal with external shocks and changes in their business environments.  
Which parts of the companies are mainly involved in this?
- Question them where they see the highest need for new methods or approaches. (e.g. strategic early warning systems, skill management, double loop learning applications)  
Where do they see the limitations for companies to cope with external shocks?
- Question them if they think that it is always advisable to strive for a high level of adaptability. (What are the risks of being adaptive?)

#### Strategic Planning

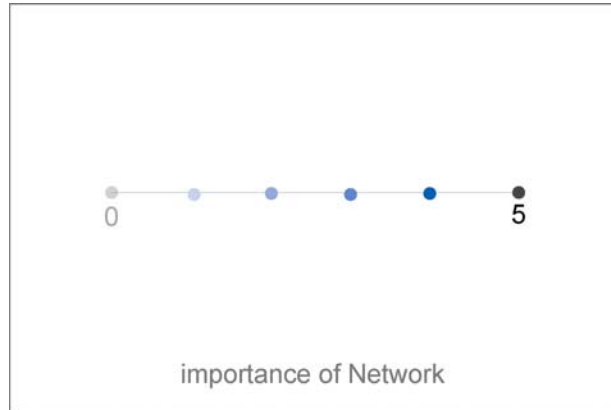
Questioned to: all GPs



- Give an explanation about the strategy/management matrix.
- Question them about their position within the strategy/management matrix today.
- Ask them about the process of their strategy formation.
- How do they balance emergent and planned (intended) strategy formation?
- Question them about details concerning the role of management in their company today.
- Question them about their future position within the strategy/management matrix.
- Ask them about the reasons for the future position they aim at.
- Does intended strategic planning still work in turbulent environments?

## Networks

Questioned to:



- Question them about their position on the network scale (now and future trend).
- Given the restraints in terms of time and resources, do they think that networking is a crucial factor for achieving adaptability?
- For which purposes and in which areas does the company use networks? In which areas or under which conditions is the use of networks not advisable?
- What are their methods to support networking inside and outside their organisation, is it better to have a planned approach to networks or to let them emerge informally?
- Do networks need a common strategy? (if yes, when?) How do approaches for the development of collective strategies in networks look like in their organisation?
- What is the equivalent to a company culture in networks/virtual organisations?

## Organisation

Questioned to:

- On the organisational level, which are the aspects that the company considers as most important to achieve a high level of robustness?
- Can self organisation be a good way to achieve robustness?

(Robustness defined as the ability to cope with internal and external shocks in a sustainable way)

- For companies that apply self-organisation:
- To which level of the organisation should self organisation be applied with respect to enhancing adaptability?
- What are the success factors and risks of self-organisation?

**Performance Management**

Questioned to:

- On which aspects should Performance Management concentrate in turbulent environments?
- Are their experiences from the past still useful in today's turbulent environments?

**Complexity Studies**

Questioned to:

- Ask them which tools / methodologies or approaches coming from the complexity theory were applied in their organisation?
- Question them about their experiences with it ? (problems and benefits)

**CLOSING QUESTIONS**

Questioned to all GPs:

- Ask them what will be the main future concerns of their company.
- Question them how these will affect business development and strategy aspects in their company.
- How will the organisational structure of their company change in future?



# Appendix E - MENI Analysis Workshop

MENI –Management role Environment Networking Importance

Location and Time:

- The workshop was conducted in Cranfield University, U.K., on September 2002. The workshop duration was about 4 hours.



Tools:

- Large hand drawn visual templates. The templates were hung on the wall.

Step

1:

- Industrial partners short presentation (background, business challenges, Industry etc.)

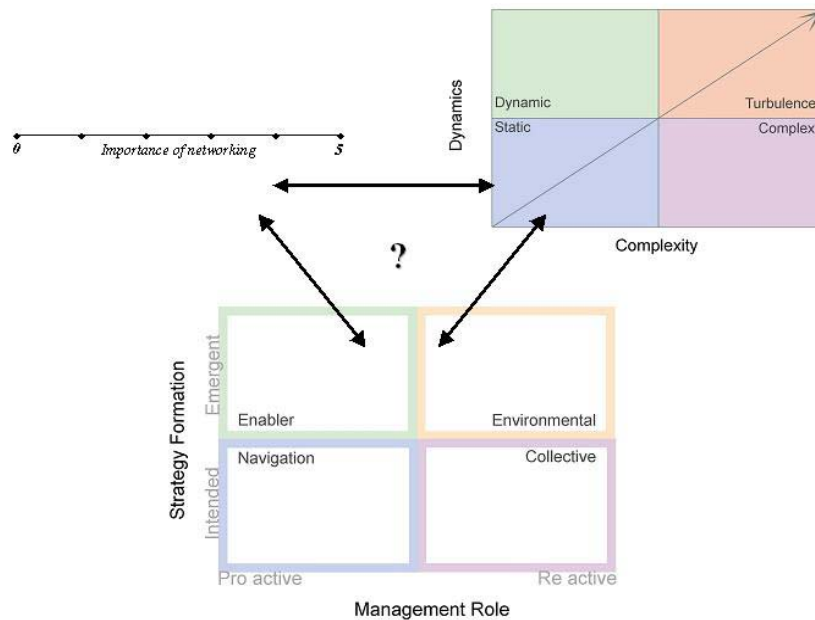
Step 2:

- Industrial partner qualitative positioning on three templates

Step 3:

- Discussion of current position and future trends.

Remarks: The analysis was easily explained and the various dimension seemed to be well understood by participants. However the mapping was focused on current perception. This point might have been a little misunderstood by some.



# Appendix F - Strategy Formation Analysis

Preparation: Overview presentation, empty poster size template containing each company name, A4 empty templates.

- Location and Time: The workshop was conducted in Fribourg, Switzerland, on Feb, 2003.



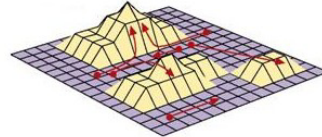
- Workshop process:
  - Part A: presentation of the overview concept using the specially prepared presentation + Q&A (45 min)
  - Part B: The empty A4 size templates were handed out to the managers. Each manager filled his company inputs (1 hr).

- Part C: each company representative read out loud his outputs; data was recorded on the posters, short discussion were formed for clarifications or common problems of interest ( 2.5 hr)
- Part D: Short conclusion
- Overview presentation slides:

## New Strategy Definition

*“..the process by which an organization generates, develops, and maintains a robust business design capable of both exploiting its current distinctive capabilities (its fitness function) on or near its current fitness peak and exploring its strategic landscape and business ecosystem for entrepreneurial opportunities beyond the lifecycle of its current business design (its sustainability function) away from its current peak.”*

(Woods 98)



## Opportunities Range



**Exploration** – exploration of entrepreneurial opportunities beyond the lifecycle of current business design and markets (sustainability function)

**Exploitation** – Leveraging existing products and capabilities in current markets (fitness function)



## Opportunities Range



**Enabler** – Tools, Process, resources and environment set by the corporate to enable emergent of divisions business success

**Navigator** – Intended strategy and guidelines set by the corporate



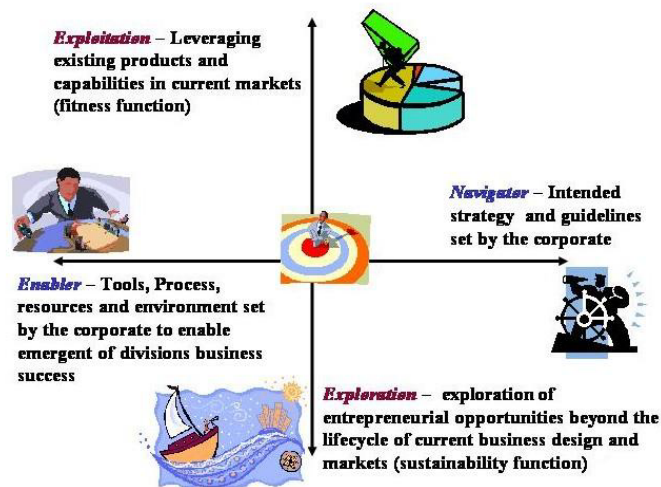
## Balance between Exploitation vs Exploration



## Balance between corporate role as Enabler vs Navigator



## Goals in two dimensions



## Workshop Questions

1. What activities does your organization do in:
  - Exploitation
  - Exploration
  - Navigator
  - Enabler
2. Roughly Estimate the split (%) Between :
  - Exploration vs. Exploitation
  - Navigator vs. Enabler
3. What problems do you have deciding how to allocate resources between:
  - Exploration vs. Exploitation
  - Navigator vs. Enabler

# Appendix G - Context Analysis

## STORIES ABOUT SIGNIFICANT EVENTS IN [COMPANY'S NAME]

*Please describe some of your company's stories referring to its current situation (referring to business/market/USP/innovation/customers/company culture), Tip: Conduct a dialogue (talk about the feeling, not just the facts)*

- *Stories: How do you get orders? What is a typical way that products are developed? What is discussed currently on management / on employee level*

*Tip: Structure the story by*

- *What, Who, When/where, Why*
- *How did you get from one point to the other*
- *Lessons (hopefully) learnt*





**DESCRIPTION OF [COMPANY'S NAME]'S IDENTITY**

*Please describe the things that make out the company's identity with respect to its dynamic abilities. This can be supported by referring to a metaphor (e.g. a fox, a bee-hive, Real Madrid, ...).*

**MAIN CHARACTERISTICS OF [COMPANY'S NAME] IDENTITY**

*Give comments if needed.*

**ANALYSIS OF CURRENT CONTEXT [COMPANY'S NAME]**

*Collect the most important internal and external factors of the company; classify them according to turbulence drivers (i.e. factors that increase the turbulence the company is facing) and other important factors. Put these factors into the matrix. There should not be more than five factors per quadrant.*

*Specify the factors (give sub-factors) and try to identify indicators for them (e.g. customers – customer structure – portion of turnover with specific customers).*

*Please give comments on these factors (e.g. by showing relations to stories told above) to improve understanding for others.*

**Factor Matrix today**

External Turbulence Driver			Further External Factors
<u>Factor</u>	specified factor	Indicator (X)	
INTERNAL TURBULENCE DRIVER			FURTHER INTERNAL FACTORS

*Specify the indicators; do they mainly indicate the degree of complicatedness (C), the degree of dynamics (D) or do they just give a hint on the scale (S) of impact on the company.*

*Mark the **indicators** that the company already tracks in blue.*

*Mark the factors that stand for the **threats** and **opportunities** in the current situation in the appropriate colour.*



*If the matrix gets too confusing, make a copy of it to keep it clear and understandable.*

### **NEXT STEPS AND IMPACTS**

*Please describe roughly which steps are planned concerning business development (strategy and organisation) within the next 1-2 years.*

### **NEXT STEPS**

*Try to forecast by sense making, on which factors this will have an impact. (What will the factor matrix look like when steps are taken? Will the turbulence drivers change?)*

*Try to forecast in the next matrix, the future factor matrix, what the future scenario could look like.*

### **FUTURE FACTOR MATRIX**

**Future Factor Matrix**

External Turbulence Driver	Further External Factors
<p><u>Factor</u></p> <p>specified factor</p>	
INTERNAL TURBULENCE DRIVER	FURTHER INTERNAL FACTORS

*Please give comments if needed.*

### **CHANGE OF IDENTITY**

*Indicate the most important factors with respect to the past, present and possible future identity of the company and the reasons that made these factors change (e.g. why did the company change from hierarchical decision processes to flat ones?).*

*Please give comments if needed.*

Past Identity	Reason for change	Present Identity
-		-
-		-
-		-
-		-
-		-

Present Identity	Reason for change	Future Identity
-		-
-		-
-		-
-		-
-		-

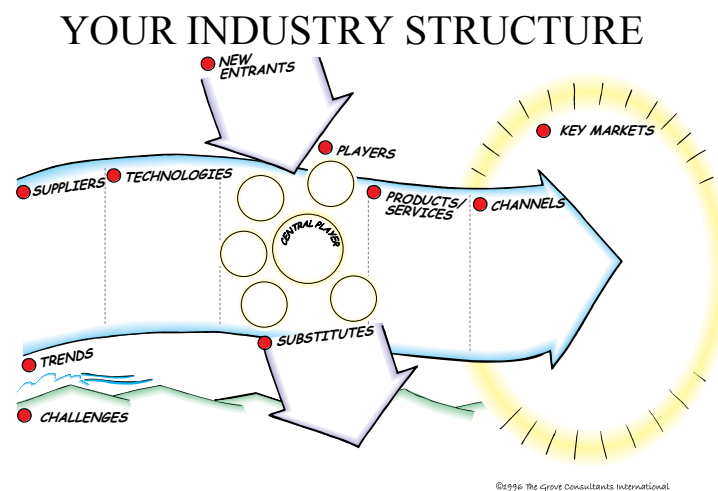
## PROFILE

Please mark the current **X** and future **Y** positions of the company on the scales beneath and add comments about the reasons for change.

certainty (forecasting)	←         →	turbulence uncertainty	
rigidity	←         →	adaptability	Orga
navigator	←         →	enabler	Mngt
exploitation	←         →	exploration	Strgy
proactive	←         →	reactive	Mngt
strong/ control	←         →	weak/ no control	PerfM

# Appendix H - Industry Structure Analysis

The industry analysis workshop was used for data collection in HiCo action research and in L5 case study. In HiCo data collection was conducted in three units, in two through a workshop (using a wall size template) with several senior managers and in one through an interview with a senior manager. In L5 it was collected as an interview with the R&D manager.



Based on grove Industry structure template ([www.grove.com](http://www.grove.com)):

**Suppliers** are the actual organisations or types of organisations that provide the component parts or services needed to create industry's products/services.

**New Entrants** describe new competitors or industry substitutes likely to have an impact on the industry.

**Technologies** address critical technologies, including proprietary and current innovations that impact industry players.

**Industry players** are significant players in the industry or the kinds of organisations that represent the major forms of competition.

**Substitutes** are alternative ways of satisfying the underlying customer needs.

**Key markets** are customers of the industry's products/services. If there are individual buyers that dominate the market, they should be identified. Otherwise, it is probably most useful to describe the market by key segments.

**Channels** identify the means by which the industry's products/services are delivered to the ultimate customer (such as resellers, direct, OEM's, etc.).

**Technologies** address critical technologies, including propriety and current innovations that impact industry players.

**Challenges** describe obstacles to success that industry players are likely to encounter.

**Trends** identify significant patterns or changes that are important in analysing the industry.

**Workshop stages:**

1. Introduction.
2. Definition of the industry (frame).
3. Identification of key players, new entrants and substitutes.
4. Characterizations of Key Markets/Customers.
5. Description of upstream suppliers and technologies.
6. Examination of products, services and channels.
7. Trends and challenges mapping.
8. Knowledge gaps identification.
9. Open discussion.